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Philosophy and Dietetics in the Hippocratic *On Regimen*

A Delicate Balance of Health

By

Hynek Bartoš



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Preface and Acknowledgements

More than a decade ago I came across *On Regimen* for the first time while working on my doctoral thesis on early Greek forms of soul-body opposition. Although this Hippocratic text only played a cameo role in my thesis, I was immediately fascinated by its philosophical spirit and complexity and slowly realized that it is a unique but unfortunately rather undervalued document of pre-Platonic philosophy. In summer 2005 I attended a summer school on ancient philosophy and science at Central European University in Budapest during which I had the opportunity to discuss my research interests with Prof. G.E.R. Lloyd. Prof. Lloyd supported my initial intuition that the text is much more sophisticated and consistent than modern scholars usually admit and wisely recommended that I focus more deeply on it. A year later during my short visit to Cambridge I was introduced to Prof. P.J. van der Eijk who further encouraged my interest in the treatise and also brought to my attention questions concerning the possible influence of this Hippocratic text on Aristotle and other later authors.

In 2007–2008 I had the chance to spend six months at the Department of History and Philosophy of Science at University of Pittsburgh as a Fulbright research scholar. Prof. J.G. Lennox, my supervisor there, initially expressed deep scepticism towards the possibility of establishing historical links between Aristotle and the extant Hippocratic treatises including *On Regimen*, a hypothesis which I was advocating as rather unproblematic at that time. Nevertheless, he enthusiastically invited me to justify my assumptions and thus provided an important impetus towards developing this hypothesis and putting it on a firmer footing.

The turning point came in 2010 when I was given the opportunity and privilege to spend three years in Berlin at Humboldt University, in the Department of Classics, as an Alexander von Humboldt-Stiftung Postdoctoral research fellow within Prof. van der Eijk's research programme 'Medicine of the Mind, Philosophy of the Body—Discourses of Health and Well-Being in the Ancient World'. Without the advantage of working in this extremely stimulating and supportive environment the present book would never have come into being.

Special thanks goes to my superiors at Charles University who kindly allowed me to take a leave of absence from teaching and other duties during my stays in Pittsburgh and Berlin and also to the Czech Science Foundation for supporting my work during the last ten years in a series of research projects (namely projects no. 401-04-P193, 401-06-0647, 401-09-0767, and 13-00800S).

My greatest debts are to the three aforementioned mentors, G.E.R. Lloyd, P.J. van der Eijk and J.G. Lennox, who supported my work at the crucial points and for many years have provided me with most helpful advice and criticism.

I am also very much indebted to many scholars, colleagues and friends for discussing the topic with me, reading my drafts and providing feedback on various occasions, in particular to Gábor Betegh, István Bodnár, Elizabeth Craik, Wei Cheng, Lesley Dean-Jones, Jakub Deuretzbacher, Julien Devinant, Giulia Ecce, Allan Gotthelf, Sylva Fischerová, Matyáš Havrda, Wolfgang Häfele, Jakub Jirsa, Frank de Jonge, Anna-Maria Kanthak, Colin G. King, Stavros Kouloumentas, Orly Lewis, Roberto Lo Presti, Daniela Manetti, Mateo Martelli, Claudia Mirrione, Katerina Oikonomopoulou, Oliver Overwien, Georgia Petridou, Roberto Polito, Amneris Roselli, Christine Salazar, Maria Michela Sassi, Christina Savino, Elizaveta Sherbakova, Karel Thein, Chiara Thumiger, Tomáš Vitek, Roland Wittwer and Leonid Zhmud.

Finally, I am grateful to Paul Scade for correcting the English of the final draft of the book and for helping me at many places to articulate my thoughts in a more precise and comprehensible way, and to John Dillon for double checking all my references to Greek and Latin texts and their translations, which saved me from many mistakes. All remaining shortcomings and errors are, of course, my responsibility.

For parts of this book I have reworked material from the following publications, which are used with kind permission of the publishers: in chap. 1 I employ ideas from Bartoš 2009b, in chap. 2 I draw on Bartoš 2012 and 2014a, in chap. 3 I fall back on Bartoš 2006 and 2009a, and in the final chapter I make use of Bartoš 2010 and 2014b.

Hynek Bartoš

Prague, November 2014

Abbreviations and Editions

Unless otherwise noted, the abbreviations I use in this study follow the conventions in Liddell–Scott–Jones, *A Greek-English Lexicon*, hereafter LSJ, and the *Thesaurus Linguae Graecae Canon of Greek Authors and Works*. For works of Galen I use the abbreviations as given by Hankinson, R.J. (ed.), *The Cambridge Companion to Galen* (Appendix 1), references are to the volume and page of Kühn's edition 1821–1830, hereafter K., or to more recent editions where available. For Plato and Aristotle I give the pagination in the standard editions of Stephanus and Bekker. References to sources included in H. Diels and W. Kranz, *Die Fragmente der Vorsokratiker*, are given using the abbreviation DK. In referring to the Hippocratic treatises I always give the volume and page number of Littré's edition (1839–1861), hereafter L. Nevertheless, whenever quoting or analysing the Greek text of a particular Hippocratic passage, I rely on more recent critical editions, where available, especially those of *Corpus Medicorum Graecorum*, hereafter CMG, or Budé (Paris: Les Belles Lettres), which I identify by the editor's name and list in the bibliography, e.g. *Vict.* 1.24 (Joly-Byl 140.24–25 = L. 6.496).

Introduction

Few ideas have been accepted by ancient Greek thinkers with such consensus as the concept of health understood as a kind of balance between opposing elements in the human body. This notion, which is comparable with the modern concept of homeostasis, was prominent not only in the domain of medical theory but also in general discussions of human nature, cosmology, ethics and politics. Historically speaking, the first physiological concept based on this principle is found in a fragment ascribed to Alcmaeon of Croton which defines health as *isonomia* ('equal right') of opposites, and disease as *monarchia*, i.e. the 'rule of one'.¹ During the fifth and fourth century BCE similar ideas were presented and discussed in many variations and used for various purposes.² The discussion of the concept of health is a typical product of the very specific historical situation of the Classical period, sometimes praised as the Golden Age of Ancient Greece, when the foundations of many scientific disciplines were laid, and when, as Jouanna puts it, 'man discovered that he was himself an object of science'.³

To inquire into the nature of man in general, and in particular into health and its analogues as the best and most desirable human condition, was not only and primarily a theoretical task, but one that always had a specific practical dimension. Hand in hand with the increasing interest in the study of the nature of man went a developing tendency to view the human constitution as a fragile and unstable structure, exposed to pathological disturbances and therefore requiring more or less permanent care and education in matters of self-control. This tendency is most evident in two distinct fields of expertise aiming at the best possible human condition, namely philosophical ethics and the art of dietetics, the latter of which was a new field of health care arising during this period as an alternative to traditional medical approaches, and which quickly won the highest respect and appreciation among medical authors as well as philosophers.

Despite almost universal agreement among the authors of the time that the optimal human condition should be viewed as a kind of balance (in the sense of equilibrium, harmony or equality between the constitutive elements of human nature), there are a great variety of approaches to the more specific questions this concept invites, such as what exactly should be kept in balance,

1 Alcmaeon DK 24 B 4.

2 Cf. Triebel-Schubert 1984 and 1987.

3 Jouanna 1999, 210.

how one can in practice achieve and maintain it, for what purposes, under what conditions, at what price, with what degree of precision, etc. Unfortunately, until quite recently most modern discussions of this concept and its historical background have been limited to the scarce fragmentary evidence of the pre-Platonic philosophers on the one hand, and the accounts of Plato, Aristotle and later philosophers on the other, while little attention has been paid to the texts which were traditionally not regarded as philosophical in the strict sense, although they offer a valuable source of evidence for the concepts under discussion, such as the treatises collected in the so called Hippocratic corpus.⁴

Aristotle's application of the concept of balance to the field of ethics, most often discussed in terms of 'the mean' (ἡ μέσότης, τὸ μέσον), has already received a considerable amount of attention from modern scholars.⁵ Concerning the historical aspects of the notion, T.J. Tracy published in 1969 a ground-breaking study under the title 'Physiological Theory and the Doctrine of the Mean in Plato and Aristotle'.⁶ Plato and Aristotle are the main authors discussed in Tracy's monograph, but he also devotes over fifty pages to medical authors and four Hippocratic authors are discussed in more detail, which represented at that time (at least in English scholarship) a pioneering and unprecedented approach. The good news is that a lot has changed in the fields of Classics and History of Philosophy and Science since the time of Tracy. It is nowadays more common than ever before to approach the Hippocratic texts from a philosophical perspective and to use the evidence they offer as a valuable background for understanding the philosophical discussions of the time. As a matter of fact, it is the interaction between ancient Greek philosophy and medicine which is today one of the most progressive fields of research.⁷ The bad news is that despite these advances, an appropriate evaluation of the Hippocratic evidence for the concept of balance and related topics is still missing. Tracy's study thus remains the most comprehensive discussion available, although it is only rarely mentioned in recent debates.

In response to this situation, in this book I would like to revisit the topic of Tracy's study with different emphasis and with a modified methodology. While Tracy uses medical evidence in general, and the Hippocratic writings in particular, as complementary to his analyses of the texts of Plato or Aristotle,

4 The importance of the concept of balance in the Hippocratic writings has been emphasized already by Jaeger 1944, 27, and recently by Craik 1995, 346–347.

5 E.g. Kalchreuter 1911, Souilhé 1919, Jaeger 1944, Wehrli 1951, Urmson 1973, Hursthouse 1980, Hutchinson 1988, Hursthouse 2006, Cremaldi 2010.

6 Tracy 1969.

7 Cf. van der Eijk 2005, 1–42.

I will move the focus onto the Hippocratic evidence, and especially *On Regimen*, which provides the most elaborated and sophisticated pre-Platonic account of the topic. Accordingly, while Tracy devotes no more than three pages to the treatise, I will make it my main point of departure in the reconstruction of the early history of the concepts of balance, health, soul and other topics related to the discussion of the nature of man. All other evidence, such as the fragments and testimonies of early Greek philosophers, other Hippocratic treatises, Plato's dialogues or Aristotle's treatises, will be discussed in relation to *On Regimen*.

The treatise *On Regimen* (Περὶ διαίτης, also referred to as *De victu*, or *De diaeta*) consists of four books in modern editions and belongs to the longest of the so called Hippocratic writings. In Galen's time, the complete version, entitled *On the Nature of Man and Regimen* (Περὶ φύσεως ἀνθρώπου καὶ διαίτης), was divided into three books, with the last part on the diagnosis from dreams appended to the third book, while book 2 circulated independently under the title *On Regimen* (Περὶ διαίτης) in two versions, starting in some copies with chap. 37 and in others with chap. 39.⁸ As for the author of the treatise, Galen reports that 'some people ascribe it to Hippocrates, others to Philistion, or Ariston, or Euryphon, or Philetus'.⁹ Galen himself holds that the first book of *On Regimen* 'very often strays from Hippocratic doctrine', although the second book 'might perhaps with good reason be thought worthy of Hippocrates'.¹⁰ Accordingly, the authorship of the treatise was disputed already in ancient times, and since a convincing argument in favour of any of the suggested authors is still missing, scepticism remains justified.¹¹

8 Galen, *Alim. Fac.* 1.1 (Helmreich 212.20–213.5). Cf. Joly-Byl 2003, 22.

9 Galen, *Alim. Fac.* 1.1 (Helmreich 212.18–20). Supposing that Galen also refers to the treatise as 'On Regimen in Health', as Joly and Byl 2003, 21–22 suggest, Euryphon, Phaon, Philistion and Ariston are listed as the potential authors in *On Hippocrates' Regimen in Acute Diseases* (*HVA* 1.17 = Helmreich 134.33–135.6), and Philistion, Ariston and Pherecydes in *On Hippocrates' Aphorisms* (*Hipp. Aph.* 6.1 = K. 18a.8.16–9.5).

10 Galen, *Alim. Fac.* 1.1 (Helmreich 213.6–8), trans. Grant. In later sections of *On the Powers of Foods* Galen regularly refers to the work 'On Regimen by Hippocrates' (*Alim. Fac.* 1.6 = Helmreich 225.20–21; 1.28 = Helmreich 254.8 and 255.9), or to 'the compiler of the work entitled *On Regimen by Hippocrates*, whoever of the ancients he was' (*Alim. Fac.* 1.13 = Helmreich 235.4–6).

11 On the basis of similarities between the Hippocratic *Diseases 4* (especially chap. 45) and *On Regimen* (*Vict.* 3.70–75), Littré 1839–1861, 7.569 suggests that the two texts might be written by the same author. Be that as it may, it can help us neither in identifying his name nor in specifying the date of *On Regimen*. W. Smith's 1979 suggestion that *On Regimen* can be ascribed to Hippocrates, including the consequent debate, is introduced below.

As in the case of the authorship of the treatise, there is no agreement on the exact date of the text with suggestions varying between the end of the fifth century and 350 BCE.¹² Joly identifies a number of early Greek thinkers as the author's philosophic predecessors,¹³ most prominently Heraclitus, Empedocles and Anaxagoras, but also Hippo, Archelaus of Athens, and possibly Democritus or Diogenes of Apollonia, and accordingly suggests 420 BCE as *terminus post quem*.¹⁴ For the purposes of the first three chapters of this study I will operate under the assumption that the author of *On Regimen* was about a contemporary of Plato,¹⁵ while in the last chapter I shall argue in support of the hypothesis that Plato's *Timaeus* can serve as a sufficiently reliable *terminus ante quem*.

In modern scholarship *On Regimen* has been recognized as an important document for the history of medicine and especially dietetics, the main topic of the treatise. The author draws on the advances of previous dietetic tradition and claims to bring them into perfection, which allows him to speak about his own achievements in terms of a 'discovery'. 'I have discovered regimen, with the gods' help, as far as it is possible for mere man to discover it',¹⁶ he proclaims proudly in the concluding lines of the treatise. Whether or not this is an appropriate evaluation of his own merits, recent scholars often read the treatise as 'the culmination of dietetic theory in the Classical Period',¹⁷ and its significance for understanding the history of Greek medicine is relatively well established, although it has not yet been adequately investigated.

Even more interesting, though less explored, is the role of the treatise in the history of ancient Greek philosophy. Unfortunately, there has been a tendency dominating the philosophical scholarship in the last century to underestimate its importance for the history of philosophy and science. The author has often been portrayed as an un-inventive compiler who occasionally 'simply did not know what he meant',¹⁸ sometimes is 'inconsistent with himself'.¹⁹ Accordingly,

12 Cf. Joly-Byl 2003, 44–49.

13 Cf. Joly 1960, 19–91 and Joly-Byl 2003, 25–34. Although all these earlier thinkers have been mentioned many times in connection with *On Regimen*, a detailed comparative work on each of these predecessors is still missing though highly desirable.

14 Joly-Byl 2003, 45.

15 This is in line with the current dating of the treatise to 'the end of the fifth or early fourth century' (Joly-Byl 2003, 47, Craik 2015, 275) or to 'the first half of the fourth century BCE' (van der Eijk 2005, 169, Jouanna 2013, 100).

16 *Vict.* 4.93 (Joly-Byl 230.12 = L. 6.662), trans. Jones.

17 Smith 1980, 440.

18 Kirk 1954, 21.

19 Jones 1931, xxxix.

his treatise should not be treated as a ‘truly scientific account’,²⁰ but rather as ‘an eclectic and very superficial quasi-philosophical treatise’,²¹ or even ‘a silly farrago of ill-digested Presocratic opinions’.²²

In contrast to such a dismissive reading of the text, I would like to advocate a more responsive approach to the contributions of the author. As for Jones’ methodological guideline, I agree that an ambition to make ‘all the detail harmonize exactly’ would be rather a futile one. Nevertheless, from the methodological point of view, it is in my opinion preferable to resist Jones’ suggestion that the author introduces details which he does not himself regard as important to the main argument. As a default assumption it can, I suppose, be very dangerous and misleading indeed, for it gives the liberty to an interpreter to set aside practically any detail of the account as insignificant, whenever one happens to have difficulties with its comprehension. What is even worse, by following the same strategy, the Greek text can be emended according to interpreters’ biased views on what is important and what is not, which has, unfortunately, happened on more than one occasion. Accordingly, despite Jones’ warning, I will assume *On Regimen* to be a text with remarkably strong unity in its structural composition, with precision in its details, and with a coherent theoretical stance pervading all four books.²³ There are certainly passages that resist such a reading, but in a number of cases the possibilities of saving the manuscript reading from superfluous emendations have not yet been exhausted.

As far as I am aware, the first important study on the treatise is C. Fredrich’s ‘Hippokratische Untersuchungen’ published in 1899. Even though only one of the six chapters deals with *On Regimen*, he discusses all four books of the treatise in considerable detail across almost 150 pages. H. Diels 1903, 85–88 includes a significant part of book 1 (chaps. 5–7, 10–24) among imitations of Heraclitus in the first edition of his ‘Die Fragmente der Presokratiker’, and in 1910 he devotes to the treatise a great part of his ‘Hippokratische Forschungen’, comments upon a number of passages, provides a critical edition of chaps. 1–2, 67 and 86–89, and suggests a number of emendations of the Greek text. Some

20 Jones 1931, xxxix.

21 Kirk-Raven-Schofield 1983, 389 n. 4.

22 Barnes 1982, 49.

23 The fourth book has been presented as an independent treatise entitled *On Dreams* (Περὶ ἐνυπνίων) in some manuscripts and printed editions, and the unity of the remaining three books has also been questioned in the past (see, for instance, Fredrich 1899). Nonetheless, in contemporary scholarship the unity of the treatise as a whole is well accepted, cf. van der Eijk 2004 and 2011a, Jouanna 1998, Craik 2015, 266. See also Joly-Byl 2003, 23–25 and Diller 1959.

interesting remarks on *On Regimen* have also been made by W. Heidel 1914, including a substantial criticism of Fredrich's ground-breaking monograph.

In 1928 A.L. Peck, remembered for his later work, published within the Loeb series, on Aristotle's zoological treatises, submitted at Cambridge University an inaugural dissertation entitled 'Pseudo-Hippocrates Philosophus: or, The Development of philosophical and other theories as illustrated by the Hippocratic writings, with special reference to the *De victu* and the *De prisca medicina*.' By 'philosophical and other theories' Peck means in particular 'the conception implied by the term *phusis*' and the 'doctrine' or 'theory of *dunameis*'.²⁴ Peck's study does not focus exclusively on the Hippocratic *On Ancient Medicine* and *On Regimen*, as the subtitle suggests, but also takes into account early Greek philosophers, Plato's *Timaeus*, the physicians reported in *Anonymus Londinensis*, and other relevant texts, including the fragments of Diocles. However, *On Regimen* remains the main text discussed in Peck's dissertation, which also provides the first English translation of the book 1 with a commentary. Most regrettably, Peck's study has never been published and so far remains available only to visitors to the Manuscripts Room in the Cambridge University Library.

Shortly after Peck, in 1931 W.H.S. Jones published the Loeb edition of *On Regimen* including a complete English translation of the Greek text and short introductory studies. Jones draws on Peck's dissertation, which he praises as a 'masterly discussion of the whole of the first book' superseding all previous interpretative attempts.²⁵ Nonetheless, without wanting to undermine Jones' indisputable merits, it can be said that his own comments do not bear comparison with the philosophical insights into the text offered by Peck. This is partly because the format of the Loeb edition does not allow much space for a commentary, and partly because Jones approaches the philosophical speculations of the Hippocratic author with much less sympathy and appreciation than Peck and others (e.g. Diels or Heidel). Despite this, Jones' remains the only complete English translation of the four books of *On Regimen* and his introductory studies still today provide English readers with the most obvious point of departure from which to approach this complicated and sometimes rather obscure text.

A year after the first edition of Jones' edition and translation, A. Palm published in Tübingen a dissertation with the title 'Studien zur hippokratischen Schrift PERI DIAITHS'. In the first part he discusses the classification of animals attested in the second book of *On Regimen* whilst in the second part

24 Peck 1928, 1, 12, 113, etc.

25 Jones 1931, xlvii–xlvi.

he focuses on the diagnosis from dreams presented in the fourth book. Palm draws on neither Peck nor Jones, and in a sense his study provides the last major contribution of German scholarship to the debate.

The discussion of *On Regimen* in the second half of the 20th century was dominated by Francophone scholarship. The most substantial contribution was made by the Belgian philologist and Hippocratic scholar R. Joly,²⁶ who in 1960 published an interpretative commentary of the treatise,²⁷ in 1968 presented a new edition of the Greek text with French translation for the 'Belles Lettres' series,²⁸ in 1978 co-edited the *editio princeps* of the Latin manuscript P,²⁹ and finally and most importantly, published in 1984 the CMG edition of the text, in cooperation with his student S. Byl.³⁰

Two monographs written in the period between Joly's 1960 commentary and the 1984 CMG edition deserve to be mentioned at this point. In 1972 Ch. Lefèvre published a book entitled 'Sur l'évolution d'Aristote en psychologie', where he suggests that Aristotle had adopted the concept of fire and innate heat at an early stage from the Hippocratic text.³¹ Lefèvre's suggestion was recorded (and for the most part rebutted) by Joly and Byl³² and, as far as I am aware, has never been discussed again since that time. The second monograph is W. Smith's 'The Hippocratic Tradition' published in 1979, which brought *On Regimen* to the attention of Hippocratic scholarship by proposing that it was written by the historical Hippocrates.³³ His suggestion has been accepted by no one among the authorities on Hippocrates and was actually one of the last attempts to solve the 'Hippocratic question', which has more or less been abandoned in recent discussions.³⁴

The CMG edition of Joly and Byl remains not only the standard edition of the Greek text, but also the most recent commentary on the treatise. While the philological value of the edition is indisputable, some reservations concerning the commentary have been expressed. V. Nutton complains that it 'says

26 Jouanna 2012, 196–199 provides an illuminating survey of the francophone Hippocratic scholarship preceding Joly.

27 Joly 1960.

28 Joly 1967.

29 Deroux-Joly 1978.

30 In this book all references to the CMG edition will always be to the revised version, i.e. Joly-Byl 2003.

31 Lefèvre 1972, 182–214.

32 Joly-Byl 2003, 254.

33 Smith 1979, 44–60, rejected by Mansfeld 1980 and Lloyd 1991, reiterated in Smith 1999.

34 Cf. Joly 1983a, Mansfeld 1983, Scarborough 1988, Lloyd 1991, 194–223, Craik 2015, xxi–xxiii.

almost nothing about the medicine of the treatise',³⁵ and I.M. Lonie criticizes the commentary as 'uneven in quality and unhelpful to the reader in search of illumination of difficulties of language and thought'.³⁶ Despite many valuable contributions to particular aspects of *On Regimen*, which have been published since the CMG edition came out,³⁷ the discussion of the philosophical and methodological contents of the treatise still remains unsatisfactory. As P.J. van der Eijk aptly remarked recently, 'a renewed, comprehensive inquiry into the intellectual and spiritual background of the author of *De victu* is highly desirable'.³⁸

To bridge the gap, this monograph aims at contributing to a renewed inquiry into the Hippocratic *On Regimen* by analysing some of the most prominent theoretical aspects of the text in a broad context. Following more perceptive approaches to the treatise (adopted in the past by Heidel or Peck, and more recently, for instance, by van der Eijk, Jouanna or Craik), I intend to challenge the dismissive reading of the methodology and philosophical contents of the Hippocratic treatise and to present it as a highly sophisticated, innovative and comprehensive text which occupies 'a unique place in the "Hippocratic" Corpus'³⁹ and 'a fascinating position in the intellectual history of late fifth and early fourth century Greece'.⁴⁰ I will argue that the author develops a remarkable philosophical framework for his dietetic account, reflects upon and makes use of some of the most important philosophical ideas of the fifth century, such as those of Heraclitus, Empedocles or Anaxagoras, introduces a sophisticated elemental theory, provides one of the most articulated accounts of the analogy between micro- and macrocosm and between *phusis* and *technē*, and last but not least, presents the most profoundly elaborated account of the body-soul relationship available in the extant pre-Platonic literature.

35 Nutton 1985, 452.

36 Lonie, 1986, 115.

37 E.g. Wöhrle 1990, W. Smith 1992 and 1999, van der Eijk 1995, 2004, and 2011, Jouanna 2007, 2012, and 2013, Wilkins 2005, Sisko 2006, Enache 2011, Demont 2014, etc. The literature published before 1984 can be found in the bibliography of the CMG edition, supplemented in 2003 by S. Byl in the second edition of the volume (p. 336). Also helpful is Fichtner's regularly updated bibliography 'CORPUS HIPPOCRATICUM, Bibliographie der hippokratischen und pseudohippokratischen Werke', which is accessible online at: <http://cmg.bbaw.de/online-publikationen/hippokrates-und-galenbibliographie-fichtner> (last entry 17/11/2014).

38 Van der Eijk 2004, 205 n. 69.

39 Craik 2015, 274.

40 Wilkins 2005, 121.

The interpretation which arises from such an analysis can also serve as an example of the complex and sometimes intricate relationship between medicine and philosophy in the Classical era. When J. Burnet in 1920 suggested in a footnote of his seminal book on early Greek philosophy that from the time of Empedocles onwards, 'it is impossible to understand the history of philosophy... without keeping the history of medicine constantly in view',⁴¹ one might at that time perhaps have taken his suggestion as a provocative exaggeration.⁴² Due to the advances made in the scholarship especially during the last few decades, the relevance of Greek medicine to the study of ancient philosophy is much more widely appreciated today, yet much remains to be done in bridging the gap between the histories of philosophy and medicine, especially as regards the Classical era. No one doubts nowadays that physicians and medical authors of that time drew on the achievements of the philosophical discussions. But it is less generally accepted that medical authors also 'actively contributed to the formation of philosophical thought more strictly defined',⁴³ and that medical thought posed a challenge to philosophy which accordingly 'profoundly transformed itself' in the strategies it adopted to face this challenge.⁴⁴ In particular, what is missing is a case study convincingly demonstrating the impact of an extant medical text on the most prominent philosophers of the time. It is therefore one of my aims to provide such a study and thus contribute to the research project outlined by Burnet.

It is not my ambition in this book to offer a comprehensive commentary of the whole treatise comparable to Joly's 1960 monograph, where all chapters of the four books are paraphrased in the same order as they appear in *On Regimen*, briefly commented upon, and a list of references to parallel texts supplied. I will be rather more selective and will focus especially on the theoretical concepts which were most vital for the intellectual debates of the time and which were influential on later discussions of the nature of man in health and

41 Burnet 1920, 201 n. 4.

42 Frede 1987, 243 in his comment on Burnet's footnote fittingly remarks that 'if this sounds like an exaggeration to us, this is partly because that given our very different philosophical concerns we do not pay much attention to the surprisingly active interest ancient philosophers did take in physiology, anatomy, and even pathology.'

43 Van der Eijk 2005, 8. See also van der Eijk 2008. Cf. Edelstein 1967, 354 who insists that 'the assumption of an influence of Greek medicine on Greek philosophy must be regarded... as historically incorrect'. The lack of references to Hippocratic and other medical authors in most recent commentaries of Plato's and Aristotle's works confirms the prevailing resistance among historians of ancient Greek Philosophy against accepting Burnet's methodological framework.

44 Pellegrin 2009, 683.

disease. Since most methodologically and philosophically significant issues are introduced and developed already in the first book, this part of the treatise will be my main point of reference, although passages from the other books will also be discussed whenever relevant.

With respect to the complexity of the treatise which comprises a great variety of topics across different disciplines, I would like to bring *On Regimen* to the closer attention of a broad range of contemporary readers with varying interests. Accordingly, in the first chapter I will focus on the place of the treatise in the history of Greek medicine in general, and of the history of dietetics in particular, and ask what are the treatises and theories the author claims to build on, what are his own original contributions to the field and finally how we can understand his declaration that he has discovered regimen. This analysis may be of interest not only to historians of ancient Greek medicine and science, but also, I hope, for readers of comparative studies since dietetic theories consisting of similar concepts are known to have been developed—most probably independently—in non-European cultures as well, as for instance in ancient China and India.⁴⁵

In the second chapter I discuss some of the most remarkable philosophical features of the dietetic doctrine, such as the cosmological context of the elemental theory based on fire and water, and the concept of *mimēsis* as employed in the micro-macrocosm and *phusis-technē* analogies. I would, thus, like to bring *On Regimen* to the attention of historians of Greek philosophy, and in particular those studying its pre-Platonic forms.

In the third chapter I introduce *On Regimen* as an important document for the history of the ancient Greek body-soul opposition, which is a topic discussed typically in the fields of ancient Greek philosophy, ethics and religious studies, where Hippocratic evidence is still only rarely taken into consideration.⁴⁶ First I will make the case that the author suggests a dietetic regimen for both body and soul, which is representative of the dietetic tradition and differs from the philosophical ethics of the time which advocate the priority of the care of

45 The Hippocratic dietetic texts as well as the Indian medical work *Caraka-Samhita* (cf. Sharma 1982, Wujastyk 1998) and Chinese *Nei Jing* (cf. Sivin 1993, Unschuld 2003) speak about a balance of primary constituents (which are very different in each of these cases as well as in the Hippocratic variations), and they all recognize the influence of seasons on health and emphasize seasonal regimen to counteract the influence of seasons, cf. Dong 2011.

46 The recently published volume 'Body and soul in ancient philosophy' edited by D. Frede and B. Reis in 2009, in which none of the 22 contributors to the volume takes *On Regimen* into consideration, provides a convenient illustration of this tendency in the philosophical scholarship.

soul over the care of body. Then I will suggest that, in adopting a doctrine of immortal and transmigrating souls, the author of *On Regimen* probably draws on the same 'Orphic' or 'Pythagorean' sources as does Plato. Nevertheless, his version of the doctrine, in contrast to Plato's, is non-dualistic and free from moral consequences.

Finally, in the fourth chapter I address in particular readers of Plato and Aristotle. My main objective there is to argue, on the basis of the cumulative evidence for the similarity in doctrinal content and expression, that both philosophers were acquainted with *On Regimen*, that they actually paid remarkable attention to it, especially when discussing the body-soul relationship, and that reading their own treatments of the soul and related topics against the background of the Hippocratic⁴⁷ treatise may be of help in understanding their own conceptions.

47 In order to avoid confusions, I should clarify that by the adjective 'Hippocratic', which I use extensively throughout the whole book, I simply advert to a particular author or his work under discussion which happened to be included in the Hippocratic collection published by É. Littré in 1839–1861. I do not mean to imply either any affiliation with the historical physician Hippocrates of Cos or presuppose any 'Hippocratic' doctrine or doctrines accepted by all or a great part of the anonymous authors of the so called Hippocratic treatises.

The Discovery of Dietetics

I have discovered regimen, with the gods' help, as far as it is possible for mere man to discover it.

(*Vict.* 4.93)

Introduction

The dietetic approach to health outlined in the introduction is amongst the most remarkable achievements of the ancient Greeks, and the related methods of health preservation introduced by Greek physicians and medical authors have had a great impact on later discussions of the topic as well as influencing our modern views to a great extent. Regarding this heritage and its early history it should be noted that in the first half of the fourth century dietetics is still occasionally considered as a novelty deviating from traditional views. A good example of such reflections can be found in Plato, who provides both a critical and a responsive reflection on the new developments. On the one hand, in the *Charmides* Plato's Socrates speaks highly of 'good physicians' (ἀγαθῶν ἰατρῶν) who do not cure painful eyes by themselves but rather treat the eyes together with the head and the whole body: 'In keeping with this principle, they plan a regime (διαίταις) for the whole body with the idea of treating and curing the part along with the whole'.¹ In this passage Socrates obviously praises dietetics especially for the application of the holistic approach.² On the other hand, in the *Republic* Socrates expresses a severe criticism against the extensive use of dietetic prevention and disapproves of the new kind of medicine. This 'plays nursemaid to the disease' and Socrates therefore suggests to his interlocutor Glaucon that it is shameful 'to need medical help, not for wounds or because of some seasonal illness, but because, through idleness and the life-style we've described, one is full of gas and phlegm like a stagnant swamp, so that sophisticated Asclepiad doctors are forced to come up with names like "flatulence" and "catarrh" to describe one's diseases'.³ Plato reflects

1 Plato, *Chrm.* 156b3–c6, ed. Burnet, trans. Kent Sprague.

2 Cf. Plato, *Phdr.* 270c, where the holistic approach of Hippocrates' method is commended.

3 Plato, *R.* 405c7–d4, ed. Burnet, trans. Grube. Cf. *Flat.* 10 (Jouanna 116.10–119.2 = L. 6.104–108) as a possible target of such a criticism.

here not only on the new medical terminology, but also on the new medical approach which explains diseases from changes in life-style (δίαίτια) and cures them by the same means. He ridicules this new trend through the example of the gymnastics trainer Herodicus, and takes dietetics as an inferior or even redundant branch of medicine.⁴ The new medicine, as Plato indicates, 'was not used before Herodicus', for no one in the old days 'has leisure to spend all his life in being ill and doctoring himself.'⁵ The main objection against dietetics expressed in the passage rests on a certain threat which is deeply embedded in the very nature of preventive dietetics, namely that it obliterates the borders between health and disease, that such type of care has no natural limits and therefore can easily consume all our time. In the end, one can 'live out his life under medical treatment, with no leisure for anything else whatever', as Plato describes Herodicus' way of life.⁶ Of course, there are, according to Plato, more important things one should live for, and this holds not only for philosophers, but for ordinary men as well. When a carpenter, to mention another of Plato's examples, is sick, 'he expects physicians to give him a drug in order to vomit the disease out, or get rid of it by purging it below or using cautery or surgery'. But if a dietician prescribes him a long diet, 'soon he says he has no leisure to be sick and that there is no advantage in living such a life, paying heed to this disease and neglecting the work at hand'. As a result, he comes back to his ordinary regimen and either 'recovers his health' or 'dies and escapes all his troubles' if his body is not strong enough to resist.⁷

Both these passages attest and conveniently illustrate the rise of the new approach to health and the corresponding advances of medicine in the Classical period, which culminates in the dietetic prevention.⁸ In the light of other extant evidence on Herodicus, which I discuss below, Plato's supposition that there was no dietetic prevention before this extravagant trainer of athletes seems to be relatively accurate, historically speaking. The aim of this chapter is to reconstruct the history of dietetics from its beginnings up to the most elaborated forms of dietetic therapy and prevention attested in some of

4 Cf. Plato, *R.* 459c, where Plato views dieticians as second-rate specialists compared to the more enterprising and venturesome physicians curing by drugs.

5 Plato, *R.* 406a–c, trans. Grube (modified).

6 Plato, *R.* 406b4–8, trans. Grube (modified).

7 Plato, *R.* 406d–e, trans. Grube (modified).

8 As pointed out by Totelin 2009, 132–133, Aristophanes (*Ra.* 939–943, eds. Coulon and van Daele) compares dietetics with tragedy, playing on words alluding to dietetic practice and 'accusing it of being pedantic and bookish'.

the Hippocratic treatises, and especially in *On Regimen*. There are several problems with reconstructing this history, which need to be identified in advance.

First, the semantic field covered by the term *diaita* is very broad and therefore needs cautious handling. Any restrictions concerning human life can be labelled with this expression, but not every moderation has to do with health.⁹ There is no doubt, for instance, that ancient Greek religious rituals were often accompanied by restrictions concerning food, drinks, sleep or sexual activities, without aiming at achieving health. This consideration is extremely important when evaluating the evidence of the Pythagorean ‘way of life’ or the specific regimen of competitive athletes, which has often been treated in modern scholarship as the evidence for the roots of ancient Greek dietetics. My specific aim is to trace the early history of medical dietetics, as I shall call it, which represented a new therapeutic approach aiming at recovering and maintaining health by moderating one’s way of life and which substantially enlarged the old medicinal approach limited for the most part to surgery and drugging.¹⁰

Secondly, there is an unfortunate tendency in the accounts of the history of dietetics to overestimate the role of Herodicus of Selymbria. This is partly due to sometimes an overemphasis on Plato’s testimony in the *Republic*, and partly to the influence of Diels’ conjectures made in his edition of the *Anonymus Londinensis*. The historical question concerning Herodicus has been clarified to great extent by the recent works of D. Manetti, who (a) convincingly distinguishes two different figures in the history of dietetics known by the same name, and (b) reveals the arbitrariness of Diels’ reconstruction of a passage devoted to Herodicus.

Thirdly, the exact dating of Hippocratic texts, which provide the most important evidence for reconstructing the development of the dietetic theory, is notoriously difficult, and neither can the relative chronology be established

9 It is possible to use the term ‘health’ in a very broad sense, as for instance in the Preamble to the Constitution of the World Health Organization (i.e. ‘a state of complete physical, mental and social well-being’). However, in this chapter I employ the term in a much narrower sense. As I shall specify in the next section, the medical concept of *hygieia* can stand relatively independently from other human goods, such as wealth, fame, good luck or the blessing of gods, and accordingly medical motivations can be distinguished, at least up to a point, from other kinds of motivations, such as those deriving from social norms or religious beliefs.

10 Given the fact that there is no definite criterion for distinguishing common foodstuffs from drugs (cf. *De arte* 6, Jouanna 230.9–15 = L. 6.10), the contrast between dietetics and pharmaceutics is always rather problematic. Nonetheless, a number of the Hippocratic authors discussed below (p. 101, n. 431) clearly draw such a distinction, which attests to its significance for the new approach to health.

with much confidence. In any case, before discussing in detail the text of *On Regimen*, I will provide a short survey of those treatises which can be supposed to be written before this treatise or at about the same time, namely *Airs, Waters, Places*, *On Regimen in Health*, *On the Nature of Man*, *On Regimen in Acute Diseases* and *On Ancient Medicine*.¹¹ Nothing can ensure that these are the texts ‘on regimen in health’ which the author of *On Regimen* reflects in his introduction, but all of them attest at least some of the ideas employed in his dietetic theory.¹² Therefore, they can provide us with a convenient background for proper evaluation of the treatise, the author of which proudly announces that he has submitted the most elaborate and accomplished account on dietetics.

Finally, the Hippocratic *On Ancient Medicine*, which is certainly one of the most important pieces of evidence, introduces ‘the first history of dietetics that is available to us in the western thought’, as Jouanna suggests.¹³ The Hippocratic author claims that dietetics started with the first human experience of food preparation, which implies not only that preventive care is an integral part of dietetics, but also, and rather surprisingly, that the preventive aspect arose first and preceded the therapeutic one: first there were the ancients ‘who originally discovered and prepared [nourishment] for all human beings’ and who ‘sought to do away with those foods which, when ingested, the human constitution in health could not overcome on account of their brutish and unblended character’.¹⁴ Only after these discoveries had been made did physicians enter the scene and cure the sick with the same dietetic method.¹⁵ According to this account (a) dietetics predates other branches of medicine due to the fact that it was connected since prehistoric times with cooking and food preparation, and (b) preventive care was practised first and only later was the same dietetic approach applied also to the therapy of diseases. Even though it has

11 *Airs, Waters, Places* can be dated to the second half of the fifth century BCE (Jouanna 1999, 375, Craik 2015, 11), *Regimen in Acute Diseases* and *On Ancient Medicine* to the end of the fifth century (Jouanna 1999, 410 and 376, Craik 2015, 6 and 285), *On the Nature of Man* and *On Regimen in Health* to the last decades of the fifth century (Craik 2015, 212), or, more precisely, to the years 410–400 (Jouanna 1999, 400). *On Regimen* is ‘probably later’ than *On the Nature of Man* and *On Regimen in Health* (Jouanna 2012, 150).

12 On the other hand, the assumption (e.g. Gillispie 1972, 420) that *On Regimen* reflects only treatises which are no more extant is unfounded.

13 Jouanna 2012, 146.

14 VM 7 (Jouanna 126.3–12 = L. 1.584), trans. Schiefsky.

15 Cf. VM 7 (Jouanna 126.12–14 = L. 1.584).

been convincingly argued that this is a tendentious myth without historical relevance,¹⁶ the myth still lives its own life and influences modern reflections.¹⁷

In the first part of this chapter I discuss first the non-Hippocratic evidence and then the Hippocratic treatises, with the exception of *On Regimen*. I aim there to disprove previous suggestions which find the fundamental roots of medical dietetics either in (a) the ancient practice of food preparation, (b) the tradition of early Pythagoreans, or (c) the early tradition of athletic training. I will argue in favour of the view that 'dietetics was a relatively late development in Greek medicine',¹⁸ and that there is hardly any evidence for medical dietetics before the second half of the fifth century, when 'treatment of internal diseases was based on a dietetics which was itself based on physical theories about elements and their qualities',¹⁹ and when the first Hippocratic treatises were written.

In the second part of this chapter I focus on the Hippocratic *On Regimen*, discussing its methodology, principles, goals and contents. I aim to show the prominent role of this text in the history of ancient Greek dietetics, with special regard to Galen, who is our most important witness of later developments in the field.

1 The Roots of Dietetics

1.1 *The Quest for Health*

There is no doubt that the Greeks of the Archaic period were already fond of sports and gymnastics. But as far as we can judge from the extant literary evidence, the goal of sport activities then was not to maintain health but rather to improve combat skills, to train youngsters for their military duties, or to win prestige in athletic competitions.²⁰ By the same token, one can justly say that the Ancients paid great attention to the cleanliness of the body and

16 Cf. Lonie 1977, 242: 'The author is of course conjecturing, and his conjecture is tendentious . . . The author's tendency is to present the view that medicine is chiefly a matter of dieting the sick. This is clearly an exaggeration, for which we must make due allowance.'

17 It may be illustrative to quote J. Longrigg 1999, 44 who confesses that upon the evidence of *On Ancient Medicine* he was himself 'induced to draw an overhasty and superficial conclusion regarding the origin of dietetics and believed that it was roughly coterminous with medicine'. But upon the convincing arguments of Lonie he also concludes that dietetics 'seems to have been relatively late development in Greek medicine'.

18 Lonie 1977, 237.

19 Lonie 1977, 236.

20 Cf. Wöhrle 1990, 25.

clothes, but they did so mainly in respect to certain social rules and standards or specific ritual demands, since a profane regard to hygienic cleanliness was unknown at that time.²¹ If we go back to the earliest Greek literary sources, Homer and Hesiod occasionally mention certain instructions concerning food and drinks or commendable habits in regard to specific occasions or seasons of the year, which might give the impression that they thus express some basic dietetic interests. But, as a matter of fact, they never indicate any specific concern with health and its preservation.²² Indeed, the term *hygieia* (or any other equivalent expressing a general concept of health) is missing in the Greek of Homer and Hesiod,²³ although this is, of course, not to say that they had no notion of health and disease at all. Healthy condition, as a rule, was identified with the absence of wounds and diseases, but health as such was never articulated as an independent value which should be revered for its own sake and which was attainable by human means, i.e. not only as a result of a gods' blessing or a piece of good fortune. The absence of an explicit concept of health in the oldest Greek literature brings us to the question of the roots of the quest for health.

As concerns the earliest textual evidence for the word *hygieia*, one can refer to several examples in early Greek lyric poetry, in Solon, Simonides or Theognis, for instance.²⁴ When the last mentioned poet writes that 'the fairest thing is the most righteous, the best thing health, and the sweetest to have our heart's desire',²⁵ he explicitly reflects the value of health. In the Classical period we can find numerous articulations of the same idea. Aristotle, for instance, quotes almost exactly the same verses and introduces them as an inscription at Delos²⁶ while Plato mentions a similar idea ('to enjoy good health is the best thing') as a part of a song that one can hear at drinking parties.²⁷ During the sixth and fifth centuries BCE health became one of the most appreciated and widely accepted values of human life, and once its value was recognized its validity remained more or less unchallenged throughout antiquity.²⁸

21 Laser 1983, 148 ff.

22 Wöhrle 1990, 22–31. One of the most illustrative examples is to be found in Hesiod (*Erga* 588–596, ed. Solmsen) where specific modifications of food, drinks and daily activities during hot summer are recommended.

23 Wöhrle 1990, 22–31, Kudlien 1967, 48 ff., Kornexl 1970, 28 ff., Laser 1983, 62 ff.

24 Solon, fr. 13 (ed. West); Simonides, fr. 8 (ed. West). Cf. Wöhrle 1990, 31 or Kornexl 1970, 17ff.

25 Theognis, *El.* 1.255–256 (ed. Young): Κάλλιστον τὸ δίκαιότατον· λῶϊστον δ' ὑγιαίνειν· πρᾶγμα δὲ τερπνότατον, τοῦ τις ἐρᾷ, τὸ τυχεῖν.

26 Aristotle, *EN* 1099a27–28.

27 Plato, *Grg.* 451e3, trans. Zeyl.

28 Cf. Edelstein 1967, 303.

According to most authors of the Archaic period, medical care was limited to the administration of drugs, the healing of wounds, and surgery, which was often connected with battlefield medicine.²⁹ There is little evidence for internal medicine before the end of the sixth century BCE, and this can be explained, as some suggest, 'by a tendency to regard non-traumatic illnesses as divinely sent, and therefore not to be cured by purely human means'.³⁰ Hesiod even holds that all diseases are of divine origin, for humans lived on earth without ills until Pandora opened the jar and released all the evils. Since that time diseases have come upon men silently, by day and night, for 'wise Zeus took away speech from them'.³¹ Moreover, in Hesiod's view morality and health are interconnected: 'justice is rewarded by health and prosperity, injustice by the opposite'.³²

Heraclitus at the turn of the Archaic into the Classical period still represents physicians as those who 'cut, burn and cruelly rack the sick',³³ while a few decades later Herodotus contrasts the gentleness of Greek remedies with the violence used by Egyptian physicians.³⁴ As the fifth century evidence clearly reveals,³⁵ the traditional *technē* of healing underwent substantial changes and extensions, the first theoretical discussions on the nature of health appeared, the first definitions of health were suggested and new therapeutic techniques introduced. This new medical approach was explicitly presented as independent from divine interventions in human lives,³⁶ an alternative to magical

29 Cf. Homer, *Il.* 11.514 (ed. Allen, trans. Lloyd 2003): '... a healer is worth as much as many others put together when it comes to cutting out arrows and smearing on gentle drugs'.

30 Lonie 1977, 236. Cf. Kudlien 1967 and 1968.

31 Hesiod, *Erga* 102–104 (ed. Solmsen), trans. Evelyn-White.

32 Lloyd 2003, 20.

33 Heraclitus, DK 22 B 58, trans. Jones.

34 Herodotus, *Hist.* 3.129–130, ed. Legrand (discussed below). Herodotus reports on Democedes and therefore reflects changes which occurred already in late sixth century, especially in Croton and possibly also in Cnidus. Hence I do not want to contrast here Heraclitus with Democedes, who was an earlier figure, but rather with Herodotus and his report on the superiority of Greek medicine.

35 Unfortunately, there is a gap in our evidence on the history of medicine before the Peloponnesian wars, which was reflected by Pliny the Elder (29.2, ed. and trans. Jones): 'The subsequent story of medicine [i.e. after the Trojan times], strange to say, lay hidden in darkest night down to the Peloponnesian War, when it was restored to the light by Hippocrates...' Despite this gap, at least some extant testimonies refer back to earlier developments, such as that of Herodotus just mentioned.

36 Cf. *Aēr.* 22 (Diller 72.10–76.4 = L. 2.76–82) or Democritus, DK 68 B 234. On the one hand, new forms of temple medicine emerged almost concurrently with the new medicine (cf. Lloyd 2003, 40–61), and specifically the one connected with the cult of Asclepius, where

healing,³⁷ and contrary to the effects of mere chance or randomness (*tuchē*).³⁸ Towards the end of the fifth century we can already read that ‘the physicians of greatest repute obviously cure by regimen’,³⁹ and from the fourth century onwards dietetics is commonly viewed as the most comprehensive and appreciated therapeutic technique.

When the Roman encyclopaedist Celsus reflects, in the first century CE, on the development of early Greek medicine, he writes that during the time between Hippocrates and the Alexandrian medicine (represented in his account by Herophilus and Erasistratus) the art of medicine fell apart into three branches: one being that which cures through diet (δαιτητική), another through medicaments (φαρμακευτική), and the third by hand (χειρουργία). According to this division dietetics had taken up a firm (and in a way prominent) position in Greek medicine during the Classical period and at the outset of the Hellenistic period.⁴⁰ Porphyry reports that dietetics began with Herodicus⁴¹ and was perfected by Hippocrates, Praxagoras and Chrysippus.⁴²

It is possible that Hippocrates indeed played an important role in the history of dietetics, but unfortunately we have no reliable textual evidence to support such a claim. Both Plato and Aristotle mention Hippocrates and recognize his medical achievements, but neither of them connects his expertise with dietetics.⁴³ In the *Anonymus Londinensis*, which in its first part most probably draws on a doxographic work ascribed to Aristotle or his disciple Menon, there is a long section devoted to Hippocrates and at least one part seems to confirm

Asclepius’ daughter Hygieia happened to be worshipped as goddess around 400 BCE (Edelstein-Edelstein 1945, vol. 2, 89). For the most recent study on the cult of Asclepius, see Wickkiser 2008.

37 *Morb. Sacr.* 18 (Jouanna 32.15–33.4 = L. 6.396).

38 *De arte* 4 (Jouanna 227.12–15 = L. 6.6), *VM* 12 (Jouanna 133.5–6 = L. 1.598), *Loc. Hom.* 46 (Craik 84.17–86.3 = L. 6.342–344).

39 *De arte* 6 (Jouanna 230.6–7 = L. 6.10).

40 Celsus, *De med. Prooemium*, 9 (ed. Spencer). Cf. Diogenes Laertius (*Vitae* 3.85, ed. Dorandi), who ascribes to Plato a distinction of five kinds of medicine: the first is pharmacy, the second is surgery, the third deals with diet and regimen, the fourth with diagnosis, the fifth with remedies (ἡ μὲν φαρμακευτική, ἡ δὲ χειρουργική, ἡ δὲ δαιτητική, ἡ δὲ νοσογνωμονική, ἡ δὲ βοηθητική).

41 Also Soranus (*Vita Hippocratis* 2 = Illberg 175.7–8) asserts that Herodicus was one of Hippocrates’ teachers, though Manetti 2005, 308–309 suggests that Herodicus in this passage may be a *falsa lectio* for Prodicus.

42 Porphyry, *Quest. Hom.* ad Il. 11.515.4–5 (ed. Schrader).

43 Plato, *Pol.* 311b–c, *Phdr.* 270c–d; Aristotle, *Pol.* 1326a13–16.

his dietetic interests.⁴⁴ Unfortunately, these traces of dietetic concerns are to be found only in a passage which is evidently not derived from the Peripatetic source but which expresses the particular views of the late Hellenistic author of the papyrus in response to the opinions ascribed to Aristotle.⁴⁵ Accordingly, the value of this papyrus for a reconstruction of the early history of dietetics is very limited, even though, as we will see shortly, it is still an important document that must be discussed.

Apart from these testimonies, we have numerous Hippocratic treatises attesting a rich dietetic terminology and explicit dietetic concerns, a number of which include longer passages devoted to dietetic discussion, and three of these are even devoted entirely to dietetics. Despite their traditional classification as 'Hippocratic', they have all been handed down as anonymous, and according to the current state of research none of them can be ascribed to the historical Hippocrates with reasonable certainty.⁴⁶ Moreover, it is possible that the late ancient authors mentioned above (i.e. Celsus, Porphyry and the author of *Anonymus Londinensis*) have inferred the connection between Hippocrates and dietetics for the most part from the evidence of the same Hippocratic treatises we have today, which were in antiquity commonly believed to be genuine works of the Coan physician.

As I will try to gradually substantiate in the course of the following discussion, only a few of the Hippocratic texts (written most probably between the end of the fifth century and the middle of the fourth century BCE)⁴⁷ reveal the specifically dietetic approach, which consists of a theory of health as a balanced mixture of opposing qualities, at the most general level hot, cold, dry and wet. This balance depends on the specific constitution and age of the individual and is strongly influenced by seasonal changes and other weather and climatic conditions. Thus, in order to maintain one's health, it is necessary to constantly moderate one's regimen in accordance with the variable conditions.

However, in order to obtain a broader view of the general context for the discussion, I will first take a brief look at other, so to speak non-Hippocratic evidence in the next section. I hope to illustrate that there was a developing

44 *Anon. Lond.* 7.15–24 (ed. Manetti).

45 While the Peripatetic account of Hippocrates closely resembles what we can find in the Hippocratic *Breaths* (*Anon. Lond.* 5.35–6.43, ed. Manetti), the author of the papyrus ascribes to Hippocrates ideas having closest parallels in the Hippocratic *On the Nature of Man*, chap. 9 (*Anon. Lond.* 6.43–7.40, ed. Manetti).

46 Cf. Edelstein 1967b, Lloyd 1991, 194–223.

47 If not indicated otherwise, I rely on the dating suggested by Jouanna 1999, 373–416 in his list of Hippocratic treatises.

discussion in the fifth century BCE demonstrating great flexibility in approaches to regimen, which were not always defined with regard to health. I believe that an analysis of these variations may shed some light on the earliest history of dietetics and thus provide us with firmer grounds for evaluating the Hippocratic evidence.

1.2 *Earliest Evidence*

An obvious way to start an inquiry into a subject is to trace back its key terminology, which is in our case *diaita*. From a philological point of view we can distinguish in the classical Greek two basic meanings of the noun *diaita*: (a) a mode of life typical for certain animal species, for specific ethnic groups or for individuals; and (b) a judgement, arbitration or the office of an arbiter. Both of these meanings are derived from the verb διατάω, which can be translated as 'to treat', 'to regulate' or 'to govern', 'to be arbiter' or 'umpire'. In the middle and passive voices the verb usually translates as 'to live' or 'lead one's life' in a certain way and at a certain place.⁴⁸ A particular *diaita* can, thus, be attributed to a class of animal species or to a certain population, as well as to a habitat or habits of concrete individuals. A more specific meaning of the word *diaita* evolved from these connotations, signifying a restricted or moderated way of life undertaken by human individuals for various purposes. One of its variations concerns the regulation of life for the sake of health, which I call 'medical dietetics' in order to differentiate it from other approaches to regimen.

The expression *diaita* is sporadically attested at the beginning of the 5th century BCE in the works of Pindar and Aeschylus.⁴⁹ One of the first Greek authors speaking more frequently about *diaita* and exploiting a whole variety of its meanings is Herodotus of Halicarnassus. For this and other reasons he is an important figure for reconstructing ancient medical history, although he was neither a physician nor a medical author in the strict sense. Herodotus was alert to the scientific and medical discussions of his time and devotes long passages to various pathological phenomena (often having close parallels in the Hippocratic literature),⁵⁰ such as epidemics,⁵¹ curious diseases (e.g. the

48 Cf. LSJ, s.v. διαίτα, or Frisk 1973, 384.

49 Pindar, *Olymp.* 2.65 and 9.66 (ed. Maehler); *Pyth.* 1.93 (ed. Maehler); Aeschylus, *Pr.* 490 (ed. Murray). According to one fragment of Alcaeus (fr. 61a, eds. Lobel and Page), the term might have been used already towards the end of the sixth century BCE, cf. Jouanna 2012, 137.

50 Cf. Althoff 1993, Brandenburg 1976.

51 E.g. Herodotus, *Hist.* 6.27, 7.171, 8.115 (ed. Legrand).

Scythian impotence or the sacred disease of Cambyses),⁵² or the influence of climate on human health.⁵³ It has also been suggested that some diseases are described by him for the first time, such as *leprē*, *phthisis* or *phuma*.⁵⁴

As for the expression *diaita*, Herodotus writes, for instance, about a species of crocodile whose habitual place is in water (ἐν ὕδατι διαίταν ποιεύμενον),⁵⁵ about a Persian habit of separating boys under the age of five years from adult men (until this age a boy ‘lives with women’, παρὰ τῇσι γυναιξὶ διαίταν ἔχει),⁵⁶ or about Adrastus, the son of the Phrygian king Gordias, who ‘lived in Croesus’ house (διαίταν εἶχε ἐν Κροίσου).⁵⁷ *Diaita* in Herodotus never implies a manner of life regulated for the sake of health and he never mentions Hippocrates, his younger contemporary and neighbour (Halicarnassus is just a few miles across the sea from Kos). Instead of Hippocrates, Herodotus reports on Democedes, ‘the son of Calliphon, a man of Croton and the most skilful physician of his time’,⁵⁸ and presents him as a representative figure of the Greek medicine of the time. According to Herodotus’ story, king Darius once dismounted from his horse so violently that the ball of the ankle joint was dislocated from its socket. He called in the best physicians of Egypt, whom he had kept near his person, but by violently twisting the foot they made the injury even worse. Then someone recommended Democedes, who was already well-known for his medical skills, and Dareius called for him with the following result:

[When] Democedes applied Greek remedies and used gentleness instead of the Egyptians’ violence, he enabled him to sleep and in a short time had him well, although Darius had had no hope of regaining the use of his foot.⁵⁹

According to this story, the reputation of Egyptian medicine was superseded, at least at Persian court, by the Greek medicine represented by Democedes. When Herodotus writes that Democedes used ‘gentleness instead of violence’, or later on that he ‘excelled the rest of the physicians, although he had no

52 Herodotus, *Hist.* 1.105 (ed. Legrand), cf. the Hippocratic *Aër.* 22 (Diller 72.10–76.4 = L. 2.76–82); Herodotus, *Hist.* 3.33, cf. the Hippocratic *Morb. Sacr.*

53 Herodotus, *Hist.* 2.77 (ed. Legrand), cf. the Hippocratic *Aër.* 23–24 (Diller 76.5–82.15 = L. 2.82–92).

54 Herodotus, *Hist.* 1.138, 7.88, 3.133 (ed. Legrand). Cf. Leven 2005, 405.

55 Herodotus, *Hist.* 2.68 (ed. Legrand).

56 Herodotus, *Hist.* 1.136.8 (ed. Legrand).

57 Herodotus, *Hist.* 1.36.1 (ed. Legrand).

58 Herodotus, *Hist.* 3.125 (ed. Legrand), trans. Godley (modified).

59 Herodotus, *Hist.* 3.130 (ed. Legrand), trans. Godley (modified).

equipment nor any medical instruments',⁶⁰ some progress in the development of the Greek medicine might be reflected in these words, namely the emergence of some new techniques of healing, less violent and non-instrumental. These features, defined in such general terms, might eventually suggest some kind of dietetic approach, but Herodotus does not explicitly confirm this connection. And, as a matter of fact, treating dislocations and other injuries never belonged to a typical dietetic agenda.

However, Herodotus' report on Democedes clearly points to Croton as the main centre of medicine in the late 6th and early 5th century BCE. 'At this time', Herodotus asserts, 'the best physicians in Greek countries were those of Croton'.⁶¹ Croton also had a long and famous tradition in athletic training, and Democedes' success in healing Darius' ankle might have to do with his experience of treating trauma in athletes.⁶²

The connection between medicine and athletic training in Croton brings us back to the question concerning dietetics. As we have seen above, Plato already puts stress on the link between dietetics and athletics, and mentions in this connection some concrete names of athletes and athletic trainers, such as Iccus, Astylus and Herodicus.⁶³ Astylus is directly connected with Croton, while Iccus appears in Iamblichus' catalogue of the Pythagoreans from Tarentum.⁶⁴ And it is probably needless to say that Croton was at that time the main centre of the Pythagorean movement. Hence we have three concurrent traditions flourishing in Croton and having possible connections with the roots of medical dietetics: medicine, athletic training and Pythagoreanism. Athletics and medicine, as L. Zhmud remarks, 'were developing in Croton before Pythagoras arrived, and he, of course, drew heavily on these'.⁶⁵ As a matter of fact, many of those who won a reputation in medicine and athletics were reported to be adherents, pupils or followers of Pythagoras,⁶⁶ and there

60 Herodotus, *Hist.* 3.131 (ed. Legrand), trans. Godley (modified).

61 Herodotus, *Hist.* 3.131 (ed. Legrand), trans. Godley.

62 Zhmud 2012, 351. On the following pages I will largely draw on the tenth chapter of Zhmud's monograph (pp. 347–379), which is the most up-to-date and accurate account of the topic I am aware of, although I will also express disagreement with some of his views.

63 Plato, *Lg.* 839e5–840a5, *R.* 406a–b.

64 Iamblichus, *VP* 36 (§ 267, ed. Deubner).

65 Zhmud 2012, 351.

66 Cf. Zhmud 2012, 351 who explicitly mentions 'the Olympic victors Milon, Astylus, and Iccus, who went on to become a trainer and doctor; the doctors Calliphon, Democedes (Milon's son-in-law), and Alcmaeon, who brought together medicine and natural philosophy'. A strong Pythagorean influence on Herodicus is presupposed by Schumacher 1963, 81.

were certainly close relationships between early Pythagoreans and Crotonian physicians.⁶⁷ In later reports these three influences tend to fuse together and therefore it is not always easy for a historian of medicine and philosophy to separate them from each other. One of the best examples of this tendency is attested in Iamblichus, according to whom early Pythagoreans paid special attention to dietetic therapy and appreciated it more than other kinds of medicine. They are said to achieve the highest accuracy in this discipline by endeavouring to learn the signs of symmetry (σημεία συμμετρίας) between exercises, food and rest. They also devoted their attention to the preparation of food and, as Iamblichus asserts, they were ‘practically the first who attempted to employ themselves in it’.⁶⁸ The concepts mentioned in his report clearly reveal close affinities with the medical dietetics as we know them from the Hippocratic treatises, and specifically from *On Regimen*, such as the notion of symmetry which relates foods and drinks with exercise and relaxation, the concern with *akribeia* appropriate to the field of study, and also the attention to the signs of symmetry and asymmetry between these variables, which is essential for any dietetic diagnosis.

1.3 *The Crotonian-Pythagorean Hypothesis*

In the light of the evidence of the texts discussed so far it is not surprising that Crotonian-Pythagorean roots of dietetics have been proposed by a number of scholars,⁶⁹ and that it still remains a relatively well established and consensual hypothesis.⁷⁰ On the other hand, sceptical voices have been heard in

67 Zhmud 2012, 349 n. 8, Pohlenz 1938, 82, Sigerist 1961, 94, Jones 1961, 1 ff., Michler 1962, 136 ff., Kudlien 1967, 54 f., Wöhrle 1990, 35 ff.

68 Iamblichus, *VP* 29 (§ 163, ed. Deubner). Cf. *VP* 34 (§ 244).

69 Palm 1933, 110 f., Jones 1961, 1 ff. and 40, Schumacher 1963, 53–66 and 81–85, de Vogel 1966, 232–244, Joly 1967, xi–xiii, Kudlien 1967, 36 ff. and 54, Joly-Byl 2003, 27–28, Wöhrle 1990, 35–49. Cf. Longrigg 1998, 146–148 and 154–155.

70 In chaps. 2 and 3 I discuss some Pythagorean motives in *On Regimen*, which might eventually support the connection between dietetics and Pythagoreans in the first half of the fourth century BCE. But this does not necessarily support any earlier connections, which I discuss in the present chapter. Some suggest, for instance, that the doctrine of symmetry between food and exercise is of Pythagorean origin (de Vogel 1966, 234, Joly-Byl 2003, 28), though it is only a wobbly assumption based on the evidence of Iamblichus. Also, Peck occasionally tends to slide into a pan-Pythagorean perspective, especially when suggesting that conceptions such as mixture (χρῆσις), association (κοινωνία), balance or harmony ‘had their origin among Pythagoreans, and especially among those of them who studied medicine, and that department of it which they held to be of singular importance, dietetics’ (Peck 1928, 124).

recent years. V. Nutton, for instance, suggests that the Pythagorean invention of dietetics in the sixth century 'is likely to be an anachronism'.⁷¹ Accordingly, in the following I aim to indicate some problematic points of this theory, concerning both the Pythagorean tradition, as I try to illustrate in this section, and also the athletic tradition, as I discuss thereafter.

My first remark is quite obvious and only repeats what is generally acknowledged, namely that there is very little authentic evidence concerning Pythagoras and Pythagoreanism attested in the Classical period, and even this scarce evidence has to be read with caution. Most of our knowledge about Pythagoras and the early Pythagoreans relies on fragmentary and often spurious testimonies. In order to illustrate the difficulties with the poor state of the textual evidence pertaining to the Pythagoreans, I will briefly introduce two examples related to our topic. My first example concerns Iamblichus' testimony on Pythagorean dietetics, which according to Diels and others draws on Aristoxenus' writings on Pythagoreans.⁷² Be that as it may, caution is still needed, especially when the following parallel with the *Anonymus Londinensis* is taken into consideration. The author of this papyrus, like Iamblichus on Diels' reading, draws on a Peripatetic source, written either by Aristotle himself or by his disciple Menon. In the case of *Anonymus Londinensis* we also have at our disposal some of the original texts that are reflected in the Peripatetic report, such as Plato's *Timaeus* discussed in columns 17 and 18 of the papyrus. As convincingly shown by W. Smith and others, the shift between the original text and its Peripatetic reflection is remarkable, both in terminology and in its inner logic.⁷³ This analogy raises the following question: Supposing that Diels is right, can we believe Aristoxenus' history of Pythagorean dietetics handed down by Iamblichus? Does Aristoxenus present a trustworthy view on early Pythagoreans, or does he also anachronistically project onto them some of the views common in his time, when medical dietetics had already dominated the discussion?

Another example illustrating the difficulties with the Pythagorean testimonia is Democedes, whom some scholars count among the Pythagoreans⁷⁴ or even among the 'main Pythagorean figures'.⁷⁵ Let me briefly summarize what kind of evidence such a hypothesis rests upon. From Herodotus we know that

71 Nutton 2004, 347 n. 69.

72 Diels 1903, 292–302. Cf. Edelstein 1943, 20 n. 49, Burkert 1972, 262 n. 113, Schiefsky 2005, 49 n. 111.

73 Smith 2002, 56–58. Cf. Manetti 1999.

74 Timpanaro-Cardini 1958, 106–117. Cf. Wöhrle 1990, 36.

75 Zhmud 2012, 363.

Democedes was a son of Calliphon,⁷⁶ and Hermippus of Smyrna in the second half of the third century BCE suggests that Calliphon was ‘a pupil of Pythagoras.’⁷⁷ In combination these testimonies may eventually suggest that Democedes’ father was a Pythagorean. In addition, Herodotus reports that Democedes married a daughter of the Olympic victor Milon,⁷⁸ who was, according to Iamblichus,⁷⁹ a prominent Pythagorean. Again, in conjunction this might indicate that Democedes’ father-in-law was also a Pythagorean. But even with the help of this reconstructed biography, nothing significant can be said about Democedes himself. Iamblichus’ report is also ambiguous: on the one hand, he mentions a Pythagorean named Democedes, who was involved in the political turmoil surrounding the conspiracy of Cylon against the Pythagoreans,⁸⁰ while on the other hand Democedes does not appear in Iamblichus’ catalogue of Pythagoreans, which is regarded as one of the most reliable sources for determining who was a Pythagorean.⁸¹ The only other ancient testimony I am aware of, which explicitly labels Democedes as a Pythagorean, is a report of the fourth century CE rhetorician and sophist Himerius.⁸² Apart from these two testimonies, neither Herodotus nor any later author ever calls Democedes himself a Pythagorean. Hence it is quite reasonable to conclude with Huffman that ‘it was undoubtedly because Democedes came from Croton at roughly the time when Pythagoras was prominent there and because of the Pythagorean connections of his father and father-in-law that late sources came to label Democedes himself a Pythagorean.’⁸³ In other words, we have no convincing justification for counting Democedes among the Pythagoreans, and especially not among ‘the main Pythagorean figures.’⁸⁴

76 Herodotus, *Hist.* 3.125 (ed. Legrand).

77 Calliphon, DK 19 A 2.

78 Herodotus, *Hist.* 3.137 (ed. Legrand).

79 Iamblichus, *VP*, 35 (§ 249, ed. Deubner).

80 Iamblichus, *VP*, 35 (§ 257–261, ed. Deubner).

81 Cf. Zhmud 2011.

82 Democedes, DK 19 A 2c.

83 Huffman 2010.

84 A similar case is presented by Alcmaeon, who was a prominent Crotonean figure and must be mentioned at least briefly. His authority was later recognized both in philosophy and medicine, and the definition of health as a balance of opposite components, which was ascribed to him, became a standard part of dietetic theories. Nevertheless, there are no other traces of any dietetic concern in his fragments, and his alleged affiliation with Pythagoreans, attested by Diogenes Laertius (*Vitae* 8.83, ed. Dorandi) and Iamblichus (*VP*, 23 § 104; 36 § 267, ed. Deubner), has been contested by Vlastos 1953, 363–364, Ostwaldt 1969, 97–99, Longrigg 1993, 48–50, and most recently Huffman 2013. With the exception of

My second remark concerns the famous and often discussed Pythagorean ‘way of life’ (τρόπος τοῦ βίου).⁸⁵ Plato, the earliest author mentioning a specifically Pythagorean regimen, refers to it with gratitude, which is a remarkable detail with respect to his otherwise critical stance towards medical dietetics and ‘care of body’ in general.⁸⁶ An obvious question arises: does Plato refer to a peculiar life style of Pythagoras that was deserving of imitation, or can his testimony also support some connection between the Pythagoreans and a specific dietetic concern with health and care of the body?

Later evidence on the Pythagorean regimen is more specific but highly diverse. According to the traditional view, which probably arose in the 4th century,⁸⁷ Pythagoras was a vegetarian and his dietetic restrictions were derived from some specific religious attitudes, such as the theory of reincarnation. On the other hand, according to Heraclides Ponticus’ work *On the Pythagoreans* Pythagoras introduced a meat diet for athletes, by which he replaced the traditional custom to feed athletes with cheese and dried figs.⁸⁸ This testimony seems to be supported by reports about Milo, the famous Crotonian athlete and a military leader, whom Aristotle calls ‘an excessive eater’ (πολυφάγος)⁸⁹ and who is said to have eaten nine kilograms of meat and the same amount of bread every day.⁹⁰

There are similar disagreements concerning the much disputed ban on eating beans, which probably goes back to ancient religious beliefs and rituals.⁹¹ Aristotle mentions a handful of possible explanations as to why Pythagoreans banned eating beans, but none of them concerns matters of health.⁹² His pupil Aristoxenus denies the ban on beans and asserts

Zhmud 2012, 121–124, most contemporary scholars regard Alcmaeon as a thinker independent of the Pythagoreans, e.g., Guthrie 1962, 341, Burkert 1972, 289, Kirk–Raven–Schofield 1983, 339, Lloyd 1991, 167, Kahn 2001, Riedweg 2005, 115; Primavesi 2012, 447. M. Wellmann 1930 pointed to similarities between the theory of health in *On Ancient Medicine* and the views of Alcmaeon of Croton and argued that the author was writing to defend an ancient tradition of Pythagorean dietetics. His suggestion has been rejected by Schiefsky 2005, 48–49.

85 Plato, *R.* 600b3–4. Cf. Isocrates (*Busiris* 28, ed. Mathieu and Brémond).

86 Cf. Zhmud 2011, 230.

87 Burkert 1972, 180–181, Zhmud 2012, 352 n. 18.

88 Heraclides Ponticus, fr. 40 (ed. Wehrli = Porph. *De abst.* 1.26). Cf. Favorinus, fr. 58 (ed. Barigazzi = Diogenes Laertius, *Vitae* 8.12).

89 Aristotle, fr. 520 (ed. Rose).

90 Phylarchus, 81F3 (ed. Jacoby). Cf. Athenaeus, *Deipnosoph.* 10.4.7–10 (ed. Kaibel).

91 Burkert 1972, 183–185, Zhmud 2012, 237.

92 Aristotle, fr. 195 (ed. Rose) = Diogenes Laertius (*Vitae* 8.34, ed. Dorandi).

that Pythagoras was actually fond of beans and ‘ate them more often than anything else’, for they have a ‘softening and relaxing effect’.⁹³ Callimachus supports Aristotle’s view two generations later and suggests a medical explanation: beans are difficult to digest and therefore it is wise to follow Pythagoras in abstaining from them.⁹⁴ Though these two interpretations disagree, both Aristoxenus and Callimachus presuppose that a specific diet should be explained with respect to nutrition and health. Hence it is possible that both authors faced a relatively new question concerning a healthy diet, which might be rather anachronistic in respect to sixth-century Croton but perfectly appropriate to the debates of their own time.⁹⁵

One can only add that none of the Hippocratic treatises contains a ban on beans and that, on the contrary, beans often form part of diets prescribed by later doctors.⁹⁶ Apart from the ban on beans and vegetarianism, many prescriptions attested in the collection of orally transmitted Pythagorean maxims and sayings (*acusmata*) might be labelled dietetic in a sense, such as the abstinence from the meat of specific animal species (e.g. the so called sacred fish), or from specific parts of animals, or avoiding particular activities such bathing in public baths, etc.⁹⁷ Nevertheless, it is reasonable to suppose that these prescriptions were motivated for the most part by certain religious beliefs or magical practices,⁹⁸ and it is doubtful whether they ever had anything to do with the care of health. The same objection can be applied to the use of incantations and music, which according to Iamblichus also played a role in Pythagorean dietetics.⁹⁹

It is sometimes claimed that religiously motivated regimen belonged to an earlier tradition, while this specifically Pythagorean regimen later transformed to a considerable extent under the influence of medical dietetics of the fifth and fourth century. The transformation from the ‘Pythagorean way of life’, in which ‘superstition and ethical views are hard to separate’,¹⁰⁰ to a rationally based

93 Aristoxenus, fr. 25. (ed. Wehrli = Gellius, *Noctes Atticae* 4.11).

94 Callimachus, fr. 553 (ed. Pfeiffer).

95 Similar sceptical view should be applied to other reports ascribed to Aristoxenus, such as to his suggestion (fr. 27, ed. Wehrli) that Pythagoreans used to eat bread with honey because it preserved them free from disease (ἀνόσους διατελεῖν).

96 Zhmud 2012, 365. E.g. *Epid.* 2.6.7 (L. 5.134), 7.6 (L. 5.376–378) and 7.9 (L. 5.380), *Acut.* (Sp.) 21 (Joly 92.12 = L. 2.502), *Vict.* 2.45 (Joly-Byl 166.18–20 = L. 6.542).

97 Cf. Burkert 1972, 166–192.

98 Wehrli 1951, 59.

99 Iamblichus, *VP* 29 (§ 163–164, ed. Deubner) and 34 (§ 244).

100 Wehrli 1951, 59.

medicine was only 'a new approach to the same thing', as Burkert suggests.¹⁰¹ Be that as it may, this 'new approach' is not attested for the early Pythagoreans and the roots of medical dietetics should be looked for elsewhere.

An alternative explanation has been suggested by L. Zhmud, who holds that 'the idea of rational dietetics being born of the spirit of magic is as remote from reality as the transformation of myth into logos.'¹⁰² He argues that all the main Pythagorean figures share a 'rational' approach to medicine and there are no traces in their theories and practices of any link with religious or magic healing.¹⁰³ Zhmud, with some reservations, agrees with the scholarly tradition highlighting the mutual links between 'Crotonian medicine, especially dietetics, and the practice of training athletes',¹⁰⁴ which is a topic deserving special attention.

1.4 *Athletic Training*

In his monograph on the history of dietetics, G. Wöhrle pays special attention to 'zwei Archegeten' of athletic dietetics, namely to the Olympic winner and gymnastic teacher Iccus of Tarentum and to the gymnastic trainer Herodicus of Selymbria, both of whom are mentioned 'more often' by ancient sources.¹⁰⁵ In the following discussion I shall leave aside their possible links with Pythagoreans and focus on the question of what we actually know about their dietetic practice. Plato mentions Iccus and Herodicus together in the *Protagoras* and identifies them rather surprisingly as sophists; Herodicus 'now of Selymbria, formerly of Megara' is even called a 'first-rate sophist'.¹⁰⁶ This testimony obviously cannot help us in reconstructing their dietetic approach. But elsewhere Plato describes Iccus' training method as follows:

Now of course we've all heard the story of how Iccus of Tarentum set about winning contests at Olympia and elsewhere. He was so ambitious to win, they say, and his expertise was strengthened by a character of such determination and self-discipline, that he never had a woman or even a boy during the whole time he was under intensive training. In fact,

101 Burkert 1972, 293.

102 Zhmud 2012, 365.

103 Zhmud 2012, 363.

104 Zhmud 2012, 351–355.

105 Wöhrle 1990, 52.

106 Plato, *Prt.* 316d3–e1.

we are told very much the same about Crison, Astylus, Diopompus, and a great many others.¹⁰⁷

This report clearly indicates that the aim of Iccus was to become a contest winner and that his diet had been subordinated to this goal. Self-discipline, sexual abstinence and intensive training is highlighted in this report, while other testimonies mention also the proverbial 'Iccus' meal' ('Ικκου δεῖπνον').¹⁰⁸

Slightly better evidence has been preserved for Herodicus, since there are several authors from the Classical period who inform us about his practices. I start again with Plato, who claims in the *Republic* that Herodicus 'was a physical trainer who became ill, so he mixed physical training with medicine (μείξας γυμναστικήν ἰατρικήν) and wore out first himself and then many others as well'.¹⁰⁹ Plato further says that Herodicus 'made his dying a lengthy process' and explains it as follows:

Always tending his mortal illness, he was nonetheless, it seems, unable to cure it, so he lived out his life under medical treatment, with no leisure for anything else whatever. If he departed even a little from his accustomed regimen (τῆς εἰωθυίας διαίτης), he became completely worn out, but because his skill made dying difficult, he lived into old age.¹¹⁰

According to this evidence Herodicus' reputation was extremely bad (which also may explain why Plato uses this example within his criticism of the excessive care of the body). Even though Plato indicates that Herodicus was treating others as well,¹¹¹ his report focuses for the most part on Herodicus' self-treatment, in which he was successful only in the sense that he managed to survive till old age. His therapy is described as extremely intensive, time consuming and, in the end, securing no stability.

As for the concrete dietetic methods endorsed by Herodicus, Plato in the *Phaedrus* remarks that he used to recommend extremely long walks.¹¹² More can be learned from the following Hippocratic passage:

107 Plato, *Lg.* 839e5–840a6, trans. Saunders.

108 Cf. Iccus, DK 15 A 2.

109 Plato, *R.* 406a7–b2, ed. Burnet, trans. Grube.

110 Plato, *R.* 406b4–8, ed. Burnet, trans. Grube.

111 This seems to be approved by Aristotle (*EE* 1234b19–24), who mentions a story about a patient of Herodicus who has offered him to pay his fee with a discount.

112 Plato, *Phdr.* 227d.

Herodicus killed patients suffering from fever (τοὺς πυρεταίνοντας) with running, much wrestling, hot baths. A bad procedure. Fever is inimical to wrestling, walks, running, massage. That is trouble on trouble for them.¹¹³

Wrestling, walks, running, bathing and massage, all these practices belonged to the dietetic agenda of the Hippocratic authors, and thus it is clear that there was some overlap between the therapeutic means used by Herodicus and the Hippocratic dietitians. Supposing that gymnastic training and medicine were two different disciplines, as Plato's report suggests when stating that Herodicus mixed physical training with medicine, another question arises: Did Herodicus himself invented some dietetic techniques as a part of his training practices, or did he adopt some already existing therapeutic procedures from medical dietetics? Herodicus was roughly a contemporary of Socrates, which allows the assumption that he adopted some early version of therapeutic dietetics and radicalized it for the purposes of athletic training. Considering the other possibility, namely that Herodicus himself invented the dietetic procedures described and criticized in the *Epidemics*, it should not be overlooked that they conflict with the allopathic principles endorsed by most of the Hippocratic authors,¹¹⁴ i.e. that fever (as a state caused or accompanied by excess heat) should be cured by cooling procedures or activities, not heating.

Another question to be raised is whether Herodicus prescribed his drastic dietetic therapy only to athletes, or whether he eventually applied the same methods also to untrained laymen. We have already seen in the cases of Iccus and Milon that the diet of top level sportsmen was rather radical compared to the regimen of an average Greek. Aristotle indicates that Herodicus' diet was not at all suitable for everyone, when he writes:

Bodily excellence is health, and of such a kind that when exercising the body we are free from sickness; for many are healthy in the way Herodicus is said to have been, whom no one would consider happy in the matter of

¹¹³ *Epid.* 6.3.18 (Manetti-Roselli 68.12–70.2 = L. 5.302), trans. Smith (modified). The sixth book of *Epidemics* (together with books 2 and 4) can be dated to 'the end of the fifth century or the beginning of the fourth' (Jouanna 1999, 389), or 'around 400' (Craik 2015, 90–91).

¹¹⁴ The allopathic principle has been most explicitly expressed as 'contraries are cured by contraries' (*Aph.* 2.22 = L. 4.476, *Flat.* 1 = Jouanna 104.11 = L. 6.92). All the main Hippocratic proponents of dietetics discussed in this chapter employ this principle, with the exception of *On Ancient Medicine*, who attacks treatment by opposites as too simplistic (*VM* 13 = Jouanna 133.7–134.17 = L. 1.598–600). Cf. *Loc. Hom.* 42 (Craik 78.13–80.12 = L. 6.334–336), where the conflict between the allopathic and homeopathic approaches is discussed.

health, because they are obliged to abstain from all or nearly all human enjoyments.¹¹⁵

In the testimonies of Plato and Aristotle, Herodicus' name is connected with the idea that some bodily condition (Aristotle calls it euphemistically health while Plato speaks rather of a mere survival) can be kept at a price which ultimately very few people are willing to pay. Supposing that Herodicus treated himself as well as others (some of whom he even killed) by remarkably drastic procedures, and considering the fact that he is reported to be a trainer of athletes, it seems to me far more probable that his therapeutic experiments were restricted for the most part to himself and the athletes he trained, rather than that ordinary patients would deliberately visit him and entrust their health to him.

The last relevant testimony on Herodicus to be discussed is that of *Anonymus Londinensis*, which played a peculiar role in the modern discussion on the history of ancient dietetics. There are two sections devoted to Herodicus in the papyrus. The first one speaks about Herodicus of Cnidos according to whom diseases originate from the residues of nutriment, which come about when men take in nourishment and stay motionless.¹¹⁶ This is actually the only trace of dietetic ideas in this passage, which otherwise focuses on various qualities of the pathological residues. The latter passage, which is largely corrupted, mentions Herodicus again, but this time without the geographical epithet. Since the anonymous never reports on an author in more than one passage, it is most probable that this time some other Herodicus is mentioned. Diels fills the lacuna in the text after Herodicus' name with the specification 'of Selymbria', and reconstructs the text as follows:

But Herodicus of Selymbria thinks that diseases come from regimen. Regimen, he says, is according to nature when it includes exercise, and the proper amount of discomfort too, so that the nourishment is digested, and the body continually receives its increase, as the nourishment is absorbed according to nature. For he thinks that health results when the body enjoys a natural regimen, and disease when the regimen is unnatural.¹¹⁷

¹¹⁵ Aristotle, *Rhet.* 1361b3–6, trans. J.H. Freese.

¹¹⁶ *Anon. Lond.* 5.6–8 (ed. Manetti): ὅταν γ(άρ) ἀκίνη<τή>σαντες οἱ ἄνθρωποι προσενέγκωνται τροφήν, συμβαίνει ταύτην μὴ διοικεῖσθαι...

¹¹⁷ *Anon. Lond.* 9.20–28 (ed. Diels, trans. Jones): Ἡρόδικος δὲ [ὁ Σηλυμβριανὸς οἶεται] τὰς νόσους [γί(νεσ)θ(αι) ἀπὸ τῆς διαίτης· ταύ-]

Later on in the same passage Diels reads that, 'In addition to these opinions there is a popular view that diseases result from the conflicts of two opposites—heat and moisture—in our bodies.'¹¹⁸ It is impossible to overlook the striking similarities of such a reconstruction of the passage with the ideas attested in *On Regimen*, such as the specifically dietetic approach, the idea that natural regimen should consist of both nourishment and exercise, or its special regard for digestion. Moreover, the theory of heat and moisture mentioned within the same discussion, although distinguished from the views of Herodicus, points again to *On Regimen*, specifically to its elemental theory of fire and water. It is therefore not surprising that these similarities were reflected upon and discussed by many Hippocratic scholars.¹¹⁹ Jones even concludes in his footnote that 'all that has been said about Herodicus fits in with the argument of this book [i.e. *Regimen* I–IV], so that it is quite possible that he, or rather a pupil (because of dates), was its author.'¹²⁰

The history of dietetics would be much clearer and easier to comprehend if Diels' reconstruction were reliable, which is unfortunately not the case. As the new edition of the papyrus by D. Manetti clearly reveals,¹²¹ the story of Herodicus of Selymbria and his dietetic theory was made up by Diels, who unfortunately misled several generations of scholars. His additions to the text in this passage were evidently made after the fashion of *On Regimen*, a text to which Diels paid great attention and suggested a number of emendations.¹²² Reading the preserved text of the papyrus without Diels' emendations, we can attest no trace of a dietetic theory or practice there and practically nothing

την δὲ (εἶναι) κατ[ὰ φύσιν, ὅταν πόννοι προσώσιν]
 καὶ ἄλγη δ' ὅσα [δεῖ, καὶ οὕτως πέψιν μὲν]
 ἔχη ἢ τροφή, ἐπ[ὶ] [δοσιν δὲ αἰεὶ λαμβάνη]
 τὰ σώματα ἀν[α]διδομ[έν]ης τῆς τροφῆς κατὰ]
 φύσιν. οἷται γ[ὰρ] τῇ [ν μὲν] ὑγίειαν γί[νεσθαι] κατὰ]
 φύσιν ἐχόν[τ] (ων)] τ(ων) σω[μάτ] (ων) περὶ τὴν δίαιταν, τὴν δὲ]
 νόσον π[α]ρὰ φύσι[ν] ἐχόντ(ων) αὐτ(ων) ...

118 Anon. Lond. 9.33–36 (ed. Diels, trans. Jones): ... [καὶ ταῦτα μὲν]
 οὕτως, [ἐ]κεῖνο δὲ ὅτ[ι] ἀπ' ἐναντί(ων) τῆς τε]
 θερμότητος καὶ ὑ[γ]ρότητος τ(ων) σωμά(των)]
 συνίστανται νόσοι, [διατεθρύληται. **]

119 Fredrich 1899, 288, Jüthner 1909, 14 ff., Deichgräber 1971, 10 ff., Joly-Byl 2003, 34–36, Wöhrle 1990, 56–57.

120 Jones 1947, 49 n. 35.

121 Manetti 2011, 18–20.

122 Diels 1910 and 1911.

which could connect it with *On Regimen* or any other Hippocratic dietetic account.¹²³

Accordingly, it is only the first passage in *Anonymus Londinensis* which can be helpful in reconstructing the early history of dietetics. It clearly reveals that apart from Herodicus of Selymbria there was also his namesake from Cnidos, 'prior to Hippocrates and classified as founder of dietetics by a strictly medical tradition', as Manetti suggests.¹²⁴ As for this tradition, she refers to three passages in Galen,¹²⁵ one passage in Caelius Aurelianus mentioning Euryphon and Herodicus together (which speaks against the possibility that they refer to Herodicus of Selymbria),¹²⁶ and a scholion to the Homeric *Iliad* where it is said that dietetics was invented by Herodicus and brought to perfection by Hippocrates, Praxagoras and Chrysippus.¹²⁷ All these authors, as well as Porphyry (mentioned above), most probably drew on the 'strictly medical tradition' where Herodicus of Cnidos plays the role of the *prōtos heurētes* of dietetics.¹²⁸

In the light of this evidence it seems plausible that Herodicus of Cnidos predated Hippocrates and paid special attention to digestion and to the relation between nutrition and exercise, which certainly played an important role in later medical dietetics. In this sense he can possibly be understood as a forerunner of dietetic diagnosis, which is, as we shall see later, a necessary precondition for establishing a dietetic therapy. Herodicus of Selymbria, on the other hand, was a contemporary of Hippocrates who applied a radical version of dietetics based on extensive exercise, which was criticised by his contemporaries and presented as a deterrent example of the new approach to health. None of those reporting on Herodicus appreciated his achievements and no one recommended his example. Plato might be right that there was no medical dietetics before Herodicus of Selymbria, but this is not to say that he invented it, only that he was a contemporary of the first formulations of a specific dietetic approach which he applied in a despicable way.¹²⁹ It is probably due

123 The only thing that may possibly be of some significance is the term τροφή (*Anon. Lond.* 9.24, ed. Manetti).

124 Manetti 2005, 295.

125 Galen, *Bon. Mal. Suc.* (K. 6.775.9), *Marc.* (K. 7.701.11), *MM* (K. 10.474.14).

126 Caelius Aurelianus, *Tard.* (Bendz-Pape 762.20–27). Manetti 2005, 302–306.

127 Schol. in *Iliad*, *Lambda* 515c (ed. Erbse).

128 Cf. Zhmud 2012, 355.

129 It is very difficult, if not impossible, to ascertain when exactly Herodicus started with his dietetic experiments. In Plato's *Republic* (whose dramatic date is circa 410) Herodicus is said to die in old age, while in *Protagoras* he is still alive. Grensemann 1975, 198–201, who rather optimistically trusts Plato's historical accuracy and deduces that *Protagoras* has to

to the enormous authority of Plato that Herodicus of Selymbria became even more famous than his namesake and, consequently, that later sources sometimes confused these two historical figures. But if we treat these two figures separately, no direct connection between foundations of medical dietetics and the tradition of athletic training can be confirmed.

It is nevertheless highly probable that within the long tradition of athletic training in Croton and elsewhere some special techniques concerning exercise and nutrition were developed for the purposes of improving specific physical capacities. As far as our evidence goes, the procedures of athletic training (e.g. Iccus' meal, sexual abstinence, extensive meat diet, extremely long walks, etc.) were relatively drastic, if measured by the standard of an untrained Greek. It has recently been demonstrated by L. Dean-Jones that the experts in athletic training and the physicians of the Classical period had remarkably different aims.¹³⁰ We have already seen in Plato's passage that medicine and athletics were considered to be two different fields of expertise, which Herodicus of Selymbria allegedly mixed together. The evidence of the Hippocratic treatises actually confirms such a division. The author of the *On Ancient Medicine* draws a close connection between the methods of dietetics and those of athletic training, namely that they share the same empirical method, but he does not suggest any common roots of the two fields. On his account, the goal of athletic trainers is not to keep health but rather to discover 'which foods and drinks a person will best overcome and so become as strong as possible'.¹³¹ As for his own therapeutic means, he focuses on the administration of foods and drinks and pays no attention to appropriate exercises, as will be discussed in detail shortly.

Other dietetic authors clearly indicate in their accounts that athletes form a special category of patients or clients, for they have different bodily constitution and different dietetic demands, and therefore should be treated separately from ordinary, that is untrained patients.¹³² The author of the *Places in*

be situated before 430 BCE and that Herodicus was older than Protagoras, concludes that he was born around 500 BCE. Be that as it may, and supposing that he died somewhere between the dramatic dates of the *Protagoras* and *Republic*, say around 420, so at about the age of 80, how long could he have practised his radical self-care? Ten, twenty or even thirty years? In any case, we can hardly presuppose that he started before the middle of the fifth century, which approximately coincides with the time when we can, on the basis of other evidence, expect the first versions of medical dietetics to have arisen.

130 Dean-Jones 2013.

131 VM 4 (Jouanna 123.14–17 = L. 1.580), trans. Schiefky.

132 Cf. *Prorrh.* 2.1 (L. 9.6–8), *Aph.* 1.15 (L. 4.466), *Salubr.* 7 (= *Nat. Hom.* 22 in Jouanna 216.4–218.19 = L. 6.82–84), *Acut.* 9 (Joly 39.21–40.1 = L. 2.244).

Man even describes gymnastics as the opposite of medicine,¹³³ and the author of the *On Nutrition* insists that the condition of an athlete is 'against nature'.¹³⁴ And when the author of the *Regimen in Acute Diseases* suggests that dietetic therapy may bring a good condition also to athletes in training,¹³⁵ he clearly indicates that athletes represent a very specific subgroup within the audience he addresses. As for the relationship between dieticians and athletic trainers, some traces of rivalry are found in *On Regimen*. Its author apparently thinks very little of athletic trainers when he states that they 'teach how to transgress the law according to law, to be unjust justly, to deceive, to trick, to rob, to do the foulest violence most fairly'.¹³⁶

From a medical point of view, the athletic condition was not seen as the best one with regard to health, but rather as a dangerous and unstable state prone to diseases.¹³⁷ Those in peak condition, as the author of the Hippocratic *Aphorisms* suggests, cannot remain in the same state and they cannot be stable, and therefore it is best for them to reduce the good condition quickly, so that the body may again begin the process of building-up.¹³⁸ The author of the second book of *Prorrhetic* treats athletes together with those who are exercising on account of diseases because both groups follow a more strictly controlled regimen than a normal healthy man.¹³⁹

133 *Loc. Hom.* 35 (Craik 74.3–5 = L. 6.326–328).

134 *Alim.* 34 (Joly 145.2 = L. 9.110). Cf. Celsus, *De Medicina*, 1.1.3 (Spencer 42.15–20), trans. Spencer: 'But whilst exercise and food of this sort are necessities, those of the athletes are redundant; for in the one class any break in the routine of exercise, owing to necessities of civil life, affects the body injuriously, and in the other, bodies thus fed up in their fashion age very quickly and become infirm.'

135 *Acut.* 9 (Joly 39.21–40.1 = L. 2.244).

136 *Vict.* 1.24 (Joly-Byl 140.24–25 = L. 6.496), trans. Jones.

137 The element of instability is also mentioned in Plato's report on Herodicus of Selymbria, who was not himself an athlete but a trainer, nevertheless his athletic self-treatment made his condition extremely unstable: 'If he departed even a little his accustomed regimen, he became completely worn out' (*R.* 406a–c). Moreover, Dean-Jones 2013, 62–63 discusses an interesting fragment from Euripides' *Autolycus* (frag. 282, ed. Nauck) which reveals that, for the same reasons, the athletic condition was not considered as ideal for military purposes either. Cf. Aristotle, *Pol.* 1335b5–8, ed. Ross, trans. Rackham: 'The athlete's habit of body is not serviceable for bodily fitness as required by a citizen, nor for health and parentage...'

138 *Aph.* 1.3 (L. 4.458–460).

139 *Prorrh.* 2.4 (L. 9.14–20).

1.5 *Regimen Towards Health*

In the previous discussion, apart from the last paragraphs, I have focussed for the most part on the evidence of the various dietetic approaches preceding or contemporary with Herodotus. Thucydides, who was a generation younger than Herodotus and no less interested in the medical discussions of the day,¹⁴⁰ uses the word *diaita* in the same way as his predecessor, with one remarkable exception. In his report on the first plague in Athens (429 BCE) Thucydides complains that no method of treatment proved to be effective, 'what did good in some cases did harm in others'.¹⁴¹ Among the examined and tested methods he also mentions dietetic therapy, if that it is the meaning of *πάση διαίτῃ* in the following passage:

Strong and weak constitutions proved equally incapable of resistance, all alike being swept away, although dieted with the utmost precaution.¹⁴²

If my reading is right, then Thucydides' testimony is, as far as I know, our earliest datable evidence for the application of dietetic therapy.¹⁴³ Though nothing specific about the dietetic methods applied can be inferred, it attests that dietetic treatment was recognized then as one of the approaches applied without success in the case of plague. Thucydides' report also seems to imply that dietetic therapy was then applied with no restrictions, which suggests an early stage of the dietetic discussion in which the difference between epidemic diseases and those originating from individual regimen was not yet recognized or at least not generally accepted.¹⁴⁴

In what follows I would like to concentrate on the first pieces of literary evidence concerning dietetic therapeutics, as attested in the Hippocratic treatises written for the most part after the plague in Athens mentioned by Thucydides. In more than half of them we can find the expression *diaita* or

¹⁴⁰ Weidauer 1954, Parry 1969, Rechenauer 1991, Lloyd 2003, 114–141.

¹⁴¹ Thucydides, *Hist.* 2.51.2 (ed. Jones and Powell).

¹⁴² Thucydides, *Hist.* 2.51.3 (ed. Jones and Powell, trans. Crawley): σώμα τε αὐταρχες ὃν οὐδὲν διεφάνη πρὸς αὐτὸ ἰσχύος πέρι ἢ ἀσθενείας, ἀλλὰ πάντα ξυνήρει καὶ τὰ πάσῃ διαίτῃ θεραπευόμενα.

¹⁴³ It is obvious that Thucydides wrote these lines years after this historical event, and that he could possibly project back practices which became standard only later. But given his sense for historical accuracy and also the fact that he was himself infected with plague and shared all the troubles and hopes with the others, I tend to trust his report. For other examples of Thucydides' reflections on the dietetic discussion of the day see Jouanna 2012, 21–38 and 152.

¹⁴⁴ Cf. *Aēr.* 2 (Diller 26.5–21 = L. 2.14), *Nat. Hom.* 9 (Jouanna 188.3–11 = L. 6.52).

some derivatives from the verb διαιτάω.¹⁴⁵ If we exclude from discussion those treatises which are most probably of Hellenistic or even later origin (e.g. *Ep., Dieb. Judic., Praec., Decent.*), there are still more than thirty treatises using dietetic terminology between the middle of the fifth and middle of the fourth century BCE. This certainly confirms the rising awareness of the new medical approach, on the other hand it should also be remarked that in most of these treatises the dietetic terminology appears in only one or two passages, which moreover do not always attest the therapeutic aspect of dietetics. As a matter of fact, only three Hippocratic writings are entirely devoted to dietetics, namely *On Regimen in Health*, *Regimen in Acute Diseases*, and *On Regimen*, and only a few others discuss at least some dietetic topics in more detail, such as *Airs, water places*, *On Ancient Medicine* and *On the Nature of Man*. These texts therefore need to be given a position of priority when discussing the possible predecessors and contemporaries of *On Regimen*.

I start with *Airs, Waters, Places*, which is generally believed to be one of the oldest Hippocratic treatises. It deals with the influence of the external environment on health, and *diaita* (or διαιτάω) means there a way of life,¹⁴⁶ an inhabited area¹⁴⁷ or a habitat,¹⁴⁸ which are the same meanings as we find in Herodotus. But the Hippocratic author also attests at least two noteworthy novelties, which signal a turning point in the development of dietetics, namely he recognizes the pathological role of *diaita*, and introduces the concept of mixture.¹⁴⁹ As for the first novelty, the author provides instructions to a physician entering a new city and its environment and recommends him to give attention not only to the winds and air of the particular place, to the soil of the land, the waters used by its inhabitants, but also to the mode of their life (*diaita*), namely what is 'pleasing to them, whether they are heavy drinkers, taking lunch, and inactive, or athletic, industrious, eating much and drinking

145 Cf. Kühn-Fleischer 1986, 173–174 (s.v. διαίτα and related expressions). See also Jouanna 2012, 137.

146 E.g. *Aër.* 1 (Diller 26.2 = L. 2.12) or 19 (Diller 66.17 = L. 2.70).

147 *Aër.* 15 (Diller 60.3 = L. 2.60) and 18 (Diller 66.3 = L. 2.68).

148 *Aër.* 18 (Diller 66.10–11 = L. 2.68).

149 Apart from these two essential dietetic concepts, *Airs, Waters, Places* also attests 'the principle triad' of dietetics, as Jouanna 2012, 139 calls it, i.e. foods, drinks and exercises. This triad is also attested in *On the Nature of Man*, *On Regimen in Health* and *On Regimen*, which certainly confirm its importance, but in none of these treatise can dietetics be reduced to these three components. On the other hand, some other elaborated dietetic accounts get along without this triad, such as *Regimen in Acute Diseases* or *On Ancient Medicine*.

little'.¹⁵⁰ An analysis of these habits may help the itinerant physician in diagnosing and predicting diseases peculiar to the local population, but there is no hint of a therapeutic use of regimen in the treatise.¹⁵¹ However, unlike those reported by Thucydides, the author clearly contrasts epidemic diseases with those which are peculiar to individuals and which 'are likely to occur through change of the mode of life (ἐκ μεταβολῆς τῆς διαίτης)'.¹⁵²

As for the second novelty, *Airs, Waters, Places* introduces the concept of mixture (κράσις/κρήσις or σύγκρησις), which otherwise appears in no more than three other Hippocratic treatises,¹⁵³ i.e. *On Ancient Medicine*, *On the Nature of Man* and *On Regimen*.¹⁵⁴ The author explains that the mild and gentle character of the inhabitants of Asia is due to the temperate climate, the 'mixture of seasons', as he puts it.¹⁵⁵ This passage, which is the only one in the treatise that speaks about a mixture, does not ascribe mixture to human bodies, as is the case in the other treatises. But considering the general strategy of the treatise, which is to illustrate the importance of environmental factors upon human organisms, there is, at least implicitly, a close relation between the mixtures of seasons and the constitutions of human bodies.

150 *Aēr.* 1 (Diller 26.2–4 = L. 2.12), trans. Jones: καὶ τὴν διαίταν τῶν ἀνθρώπων ὁκοίη ἤδονται, πότερον φιλοπόται καὶ ἀριστήται καὶ ἀταλαίπωροι ἢ φιλογυμνασταί τε καὶ φιλόπονοι καὶ ἔδωδοι καὶ ἄποτοι. The instruction that good physicians should examine 'the diets' of the inhabitants of the city is reflected in a fragment of Euripides (917, ed. Nauck). On the connections between medicine and tragedy see Jouanna 2012, 55–79.

151 It is likely that the Hippocratic author considered also the possibility of curing pathological conditions by dietetic means, but he does not mention this option in his treatise and probably does not feel the need to share this idea with his readers, for his topics and aims are different.

152 *Aēr.* 2 (Diller 26.13 = L. 2.14).

153 The definition of health as the proportionate mixture (κράσις σύμμετρος) of the qualities has been ascribed also to Alcmaeon (DK 24 B 4), but the wording of this part of the fragment provided by Aetius is dubious. Cf. Ostwald 1969, 102–105 and 177.

154 As the analysis of W. Smith 1992, 270–271 reveals, there are 27 occurrences of these terms in the Corpus Hippocraticum, 19 of them in *On Regimen*, five in *On Ancient Medicine*, two in *On the Nature of Man*, and one in *Airs, Waters, Places*. These four treatises and their evidence for the concept are discussed in detail in the Hippocratic section of Tracy's analysis of the physiological concept of the mean (Tracy 1969, 32–66).

155 *Aēr.* 12 (Diller 54.12–13 = L. 2.52): τὸ δὲ αἴτιον τούτων ἡ κρήσις τῶν ὥρέων. Cf. Plato speaking about the temperate mixture of seasons (εὐκρασία τῶν ὥρων) bringing forth men of surpassing wisdom (*Tim.* 24c6–7, ed. Burnet) and free of disease (*Phd.* 111b1–2, ed. Burnet: τὰς δὲ ὥρας αὐτοῖς κράσιν ἔχειν τοιαύτην ὥστε ἐκείνους ἀνόσους εἶναι).

In general, the best environment for men is the one where the cold and the heat are balanced.¹⁵⁶

Regimen in Acute Diseases is also considered to belong to the group of relatively early treatises in the corpus, probably the first one of those totally devoted to dietetic therapy and also the first attesting a longer written discussion on the topic. It is a critical and polemic work with a specific focus on the treatment of acute disease (enumerated in chap. 5), i.e. diseases accompanied by high fever. The priority of this topic is explained by the argument that such acute diseases ‘kill the great majority of patients’.¹⁵⁷ The author opens his discussion with critical remarks on a work called *Cnidian Sentences*. He gives no indication of the interval separating the composition of this work from his own treatise, but he clearly recognizes that the original text was rewritten at least once before his time. The original authors are said to provide a good description of symptoms for each individual disease, but the remedies they used were extremely limited. Except in the case of acute diseases, their therapy consisted of administration of purges and the prescription of whey and milk at the proper season.¹⁵⁸ The later revisers of the text proved to be ‘more scientific’ (ἡττικώτερον), nevertheless regimen received no treatment worth mentioning from the ancient physicians, which the author criticizes as a serious omission.¹⁵⁹ This is not to say that they would have no dietetic concerns at all, but only that their approach does not deserve comparison with the dietetics advocated by the author.¹⁶⁰ Despite appreciating the advances introduced by these revisers, he distances himself from their theories and practices and provides his own recommendations: using barley gruel and the juice made of it,¹⁶¹ wine,¹⁶² *hydromel*,¹⁶³ *oxymel*,¹⁶⁴ vinegar¹⁶⁵ and water.¹⁶⁶ He concludes

156 *Aër.* 5 (Diller 32.20–21 = L. 2.24): εἰσὶν τε μάλιστα καὶ οὕτω κειμένη πόλις ἥρι κατὰ τὴν μετριότητα τοῦ θερμοῦ καὶ τοῦ ψυχροῦ . . .

157 *Acut.* 5 (Joly 37.18–21 = L. 2.232), trans. Jones.

158 *Acut.* 2 (Joly 36.15–17 = L. 2.226).

159 *Acut.* 3 (Joly 36.21–37.4 = L. 2.226), trans. Jones.

160 Considering the possibility that there was some significant connection between the *Cnidian Sentences* and Herodicus of Cnidos, it should be emphasized that even though the author of *Acut.* recognizes some valuable contributions of the Cnidian authors to medical therapeutics, he does not understand them as dietetic in the strict sense.

161 *Acut.* 10–25 (Joly 40.2–47.3 = L. 2.244–278).

162 *Acut.* 50–52 (Joly 57.19–59.7 = L. 2.332–336).

163 *Acut.* 53–57 (Joly 59.8–61.13 = L. 2.336–348).

164 *Acut.* 58–60 (Joly 61.14–63.9 = L. 2.348–356).

165 *Acut.* 61 (Joly 63.10–16 = L. 2.358).

166 *Acut.* 62–63 (Joly 63.17–64.21 = L. 2.358–362).

with recommendations concerning baths, and in the middle section provides an extensive discussion of the effects of a change in diet.¹⁶⁷

With regard to the evidence discussed so far, a remarkable innovation can be recognized in chap. 9 where the author claims that the account presented in his own treatise 'has great power to bring health in all cases of sickness, preservation of health to those who are well, good condition to athletes in training, and in fact realization of each man's particular desire'.¹⁶⁸ This is the first explicit articulation of a dietetic approach in our survey which suggests in principle the same treatment to those who are ill and those who are healthy and which explicitly takes into consideration healthy men as well as athletes.

I. Lonie, who reads the text as 'a historical sketch, the intention of which is to support the author's own claim to originality and to advance upon his predecessors',¹⁶⁹ holds the view that the basic structure of the treatise consists of 'the division of the items of diet into SITIA, RUPHEMATA and POTA',¹⁷⁰ i.e. foods, gruels and drinks.¹⁷¹ This dietetic pattern is consistent also with the account of dietetics presented in *Ancient medicine*, which indicates that it was 'deeply established in Greek medicine'.¹⁷²

As already mentioned, the author of *On Ancient Medicine* presents the view that medicine is chiefly a matter of dieting therapy and prevention, and that this has always been the essence of medicine. Medicine is viewed as a branch of dietetics, which stems from the experience of food preparation based on empirical and experimental methods. This is certainly an exaggeration and an anachronistic presentation of the history of medicine. But the author, as Lonie suggests, 'could not have hoped for any success whatsoever in presenting such a view, if the medicine familiar to his audience had not been largely a matter of diet, and if the administration of diet had not been a large part of the physician's therapeutic task'.¹⁷³

Although the author strongly rejects the new trend of introducing philosophical speculations into the field of empirical medicine, such as the theories based on the qualities heat, cold, moist and dry,¹⁷⁴ he himself employs

167 *Acut.* 65–68 (July 65.4–67.18 = L. 2.364–374); 24–49 (July 47.4–57.18 = L. 2.278–332).

168 *Acut.* 9 (July 39.21–40.1 = L. 2.244), trans. Jones.

169 Lonie 1977, 236.

170 Lonie 1977, 248.

171 Lonie 1977, 249–258 recognizes the same structure also in the Hippocratic *Diseases 2*, *Internal Affections*, *Affections*, *Diseases of Women 1*, *Diseases of Women 2*, and *On Fractures*.

172 Lonie 1977, 249.

173 Lonie 1977, 242.

174 *VM* 1 (Jouanna 118.1–10 = L. 1.570).

relatively new ideas in his account, such as the concepts of *dunamis*, *krasis*, *mixis*, or *harmonia*, which are typical of the later development of dietetic theories, as Lonie revealed and as the account of *On Regimen*, which integrates all these concepts, confirms.

While *Airs, Waters, Places* discusses in length the influence of climate on the human constitution, the author of *On Ancient Medicine* is for the most part concerned with the balance between food and the human constitution. He speaks about a mixture (κρῆσις) of qualities in the nutrition and about their tempering according to the needs of the sick.¹⁷⁵ These qualities are tempered by opposites, cold by heat and vice versa.¹⁷⁶ Some passages suggest that bodily humours also fuse together and make mixtures, even though this concept is not clearly explicated in the text.¹⁷⁷

It was already ‘the ancients’, according to this account, who ‘sought for nourishment suited to their constitution (τροφήν ἀρμόζουσαν τῇ φύσει),’¹⁷⁸ and experimented with food which they boiled or baked, as well as mixing various foods ‘and blend[ing] the strong and unblended things with the weaker’ so as to adapt all food ‘to the constitution and power of the human being’ (πρὸς τὴν τοῦ ἀνθρώπου φύσιν τε καὶ δύναμιν).¹⁷⁹ They supposed that the ‘powers’ (δυνάμεις) of raw food are too strong for men, indigestible and therefore unsuitable, and cause pain, disease and death. Only after the strong powers of raw food are modified and made proportionate to the human constitution by mixing and cooking, can blended food thus be assimilated and in consequence provide ‘nourishment, growth, and health’ (ἀπὸ τούτων τροφήν τε καὶ αὔξησιν καὶ ὑγίειαν).¹⁸⁰

The human body can also be described in terms of mixture. As I have already remarked, the author refuses speculations based only on the four elemental qualities, and apart from these he also speaks about the qualities of sweet, bitter, acid, salty, astringent, insipid ‘and myriad other differences’.¹⁸¹ In chap. 16

175 VM 5 (Jouanna 124.13–20 = L. 1.580–582). Cf. Aeschylus, *Pr.* 478–483 (ed. Murray, trans. Smyth [modified]) where Prometheus holds: ‘if ever man fell ill, there was no defence—no healing food, no ointment, nor any drink—but for lack of medicine they wasted away, until I showed them how to mix soothing remedies (χράσεις ἡπίων ἀκεσμάτων) with which they now ward off all their disorders’.

176 VM 16 (Jouanna 139.8–9 = L. 1.606–608) and 19 (Jouanna 144.5–8 = L. 1.618).

177 VM 19 (Jouanna 143.7–144.5 = L. 1.616–618) and 24 (Jouanna 153.7–19 = L. 1.634–636).

178 VM 3 (Jouanna 122.6–8 = L. 1.576), trans. Schiefsky.

179 VM 3 (Jouanna 122.11–123.3 = L. 1.576–578), trans. Schiefsky.

180 VM 3 (Jouanna 123.2–3 = L. 1.578), trans. Schiefsky.

181 VM 14 (Jouanna 136.10–12 = L. 1.602), trans. Schiefsky.

he explains why heat and cold are actually the least powerful qualities. His argument goes as follows:

As long as the cold and the hot are mixed (μεμιγμένα) together with one another in the body they do not cause pain, for blending and moderation (κρήσις γὰρ καὶ μετριότης) come to the cold from the hot (ἀπὸ τοῦ θερμοῦ) and to the hot from the cold (ἀπὸ τοῦ ψυχροῦ). But whenever either is separated and stands apart (ἀποκριθῇ χωρὶς ἐκάτερον), then it causes pain.¹⁸²

This passage opens a long series of arguments against overestimating the role of heat and cold in the human body, which concludes towards the end of chap. 19 with the assertion that ‘as for all the other powers in the human being [i.e. other than heat and cold], the greater the number of things with which they are mixed, the milder and better they become.’¹⁸³ The bodily mixture is in principle of the same nature as the mixture of the most easily digestible food: the more components are mixed, the healthier it is. Even though it seems to be an attack against a specific theory very similar to that of *On Regimen*, the concept of the moderated balance of opposites within a mixture is taken for granted by both authors. Moreover, the author of *On Ancient Medicine* clearly recognizes the prophylactic value of dietetics and puts therapy and prophylaxis on the same footing,¹⁸⁴ though there is a great difference between a diet for one who is healthy and a diet for one who is sick. Medicine would actually never have been discovered for there would have been no need for it, as the author assumes, ‘if it were beneficial for the sick to follow the same regimen and diet as the healthy, taking the same foods and drinks and following the same regimen in other respects.’¹⁸⁵

The concept of mixture, which is applied to climate in *Airs, Waters, Places* and to food and individual bodily constitutions in *On Ancient Medicine*, also plays a crucial role in *On the Nature of Man* where each individual constitution is supposed to have a specific mixture of elemental constituents, spelled out in two different ways. First, the author states that generation cannot take place if the hot, cold, dry and moist are not ‘tempered and equal’ (μετρίως πρὸς ἀλλήλα

182 VM 16 (Jouanna 139.6–10 = L. 1.606–608), trans. Schiefsky.

183 VM 19 (Jouanna 145.12–14 = L. 1.620), trans. Schiefsky.

184 Cf. VM 14 (Jouanna 135.11–13 = L. 1.600) where the author says that person's whole life depends upon the differences in the properties of foods and their effects, ‘whether he is healthy, recovering from illness, or sick (καὶ διὰ τούτων πᾶς ὁ βίος καὶ ὑγιαίνουντι, καὶ ἐκ νούσου ἀνατρεφόμενοι καὶ κάμνοντι);’ trans. Schiefsky.

185 VM 3 (Jouanna 120.16–121.2 = L. 1.574), trans. Schiefsky.

ἔξει καὶ ἴσως) or ‘mutually well-tempered’ (καλῶς ἔχοντα τῆς κρήσιος τῆς πρὸς ἄλληλα).¹⁸⁶ Then, he introduces his four humour theory in chap. 4 and claims that man enjoys the most perfect health when blood, phlegm, yellow bile and black bile are in the body ‘duly proportioned to one another in respect of mixture (κρήσις), power and bulk, and when they are perfectly mingled (μάλιστα μεμιγμένα).’¹⁸⁷ In addition to employing the concept of mixture, which will be further discussed later in comparison with the account of *On Regimen*, remarkable dietetic considerations are attested in chap. 9. There are altogether twelve occurrences of the terms δίαίτα, διαίτημα and διαιτάω in the treatise and all of them appear in the same chapter,¹⁸⁸ which also draws a distinction between epidemic diseases and those resulting from regimen: ‘Diseases arise, in some cases from regimen, in other cases from the air by the inspiration of which we live.’¹⁸⁹ Various aspects of regimen which cannot be responsible for epidemic diseases are enumerated in the following passage:

For it is clear that the diet (διαιτήματα) of each of us is not the cause, since the disease attacks all in turn, both younger and older, men as much as women, those who drink wine as much as those who drink water, those who eat barley cake as much as those who live on wheat bread, those who take much exercise as well as those who take little.¹⁹⁰

Accordingly, only those diseases which are caused by a particular regimen can and should be treated by a change of regimen. In such cases it is necessary to pursue a treatment which is ‘opposed to the cause of the disease’ (ἐναντιούμενον τῇ προφάσει τῆς νούσου).¹⁹¹ Additional conditions of such a treatment are spelled out as follows:

This one should learn and change, and carry out treatment only after examination of the patient’s constitution, age, physique, the season of the year and the fashion of the disease, sometimes taking away and

186 *Nat. Hom.* 3 (Jouanna 170.11–172.2 = L. 6.38), trans. Jones.

187 *Nat. Hom.* 4 (Jouanna 172.15–174.2 = L. 6.40), trans. Jones (modified): ὑγιαίνει μὲν οὖν μάλιστα, ὅταν μετρίως ἔχῃ ταῦτα τῆς πρὸς ἄλληλα [κρήσιος καὶ] δυνάμιος καὶ τοῦ πλήθους, καὶ μάλιστα μεμιγμένα ᾗ. I read κρήσιος καὶ after Littré and Jones, in spite of the fact that Jouanna does not even mention this reading in his apparatus criticus.

188 It is probably the same chapter which *Anonymus Londinensis* reflects when reporting on the allegedly authentic views of Hippocrates (*Anon. Lond.* 7.15, ed. Manetti).

189 *Nat. Hom.* 9 (Jouanna 188.10–11 = L. 6.52), trans. Jones.

190 *Nat. Hom.* 9 (Jouanna 188.15–20 = L. 6.52), trans. Jones (modified).

191 *Nat. Hom.* 9 (Jouanna 190.4 = L. 6.54), trans. Jones.

sometimes adding, as I have already said, and so making changes in drug-ging or in regimen to suit the several conditions of age, season, physique and disease.¹⁹²

These two passages when taken together reveal quite a comprehensive list of factors which need to be considered in dietetic diagnosis and therapy: individual constitution, age, gender, drinks, foods, exercises, season of the year, and the nature of the disease.¹⁹³

The allopathic principle is most explicitly expressed in the opening passage of chap. 9, where we read:

Furthermore, one must know that diseases due to repletion are cured by evacuation, and those due to evacuation are cured by repletion; those due to exercise are cured by rest, and those due to idleness are cured by exercise. To know the whole matter (τὸ δὲ σύμπαν γινῶναι), the physician must set himself against the established character of diseases, of constitutions, of seasons and of ages; he must relax what is tense and make tense what is relaxed.¹⁹⁴

The last clause mentioning exercise is of special importance for our discussion, for it is not to be found often in the other dietetic accounts,¹⁹⁵ though it is considered to be one of the most important aspects of dietetics in *On Regimen*. In *Airs, Waters, Places* we have read that recognising the habits of man concerning both eating (heavy drinkers, taking lunch . . . eating much and drinking little) and exercises (inactive-athletic-industrious) can be helpful in diagnosis, but in the present passage exercises are recognized also as an important therapeutic aspect. But unlike in *On Regimen*, where the proportion between foods and exercise is presented as the most distinctive feature of the 'discovery', on this account these two aspects are treated separately: there should be a balance between activity and rest on the one hand, and between too much food and too little food on the other.¹⁹⁶

192 *Nat. Hom.* 9 (Jouanna 190.7–12 = L. 6.54), trans. Jones.

193 All these aspects are accounted for in the theory of *On Regimen*, apart from disease which is considered there not to be an independent factor affecting health but rather a consequence of a pathogenic imbalance.

194 *Nat. Hom.* 9 (Jouanna 188.3–9 = L. 6.52), trans. Jones. Cf. *Flat.* 1 (Jouanna 103.13–105.5 = L. 6.92).

195 Cf. *Aff.* 19 (L. 6.228) and 20 (L. 6.230).

196 Cf. Aristotle, *EE* 1096a33–34.

From the last passage mentioned it is clear that the aim of the treatise is to instruct physicians how to diagnose their patients and to suggest to them an appropriate dietetic therapy. But in chap. 13 we also find the following appeal to the patient's responsibility for his own health: 'The patient himself must bring about a cure by combating the cause of the disease, for in this way will be removed that which caused the disease in the body.'¹⁹⁷ This suggests that the role of the physician is limited to diagnosing his patient or client and advising him how to take the care of his health into his own hands. This brings us closer to the possibility that dietetic care can also be understood as a self-therapy and even as preventive self-care, which is the main topic of *On Regimen in Health*.¹⁹⁸

Laymen are mentioned in the very first sentence of *On Regimen in Health*,¹⁹⁹ and they are also addressed in the concluding passage which advises that 'a wise man should consider that health is the greatest of human blessings, and learn how to derive benefit in his illnesses by his own thought.'²⁰⁰ The main message to the laymen is rather simple and in perfect accordance with *On Regimen*: the author advises them to 'pay attention to age, season, habit, land, and physique, and counteract the prevailing heat or cold' (chap. 2). Following these instructions one can enjoy the best health within the limits of given conditions. After introducing some general dietetic instructions regarding seasonal changes and appropriate modifications of regimen (chap. 1), the author specifies two types of bodily constitutions, the moist and the dry, as well as two age categories, the young and old (chap. 2). The following chapters briefly discuss various dietetic instructions concerning walking, bathing and clothing (chap. 3), advise how to pursue thinning and fattening diets (chap. 4) and how

197 *Nat. Hom.* 13 (Jouanna 200.14–16 = L. 6.64), trans. Jones.

198 *On Regimen in Health* was traditionally believed to present a continuation of *On the Nature of Man* written by the same author, which is still a very probable theory (cf. Jouanna 2002, 22–38). Nevertheless Littré and Jones treat the two texts separately, in which I follow them in order to avoid confusions.

199 *Salubr.* 1 (= *Nat. Hom.* 16 in Jouanna 204.22 = L. 6.72): Τοὺς ἰδιώτας ὦδε χρὴ διαιτᾶσθαι.

200 *Salubr.* 9 (= *Nat. Hom.* 24 in Jouanna 220.8–10 = L. 6.86), trans. Jones (modified): 'Ἀνδρα χρὴ, ὅστις ἐστὶ συνετός, λογισάμενον ὅτι τοῖσιν ἀνθρώποισιν πλείστου ἀξίόν ἐστιν ἢ ὑγίειν, ἐπίστασθαι ἀπὸ τῆς ἑωυτοῦ γνώμης ἐν τῇσι νούσοισιν ὠφελεῖσθαι. An almost identical passage is to be found at the beginning of *Aff.* 1 (L. 6.208). Cf. *Vict.* 2.71 (Joly-Byl 204.8–9 = L. 6.610), trans. Jones: 'The wise man, however, should not let things drift, but as soon as he recognises the first signs, he should carry out a cure by the same remedies as in the first case ...' (ἀλλ' οὐ χρὴ προέσθαι τὸν φρονέοντα, ἀλλ' ὅταν ἐπιγνῶ τῶν τεκμηρίων τὰ πρῶτα, τῇσι θεραπέησιν ὥσπερ τὸν πρότερον ἐκθεραπευθῆναι ...).

to apply emetics and clysters (chap. 5). Some specific dietetic instructions are given to infants and women (chap. 6) and athletes (chap. 7).²⁰¹

2 Dietetics in the Hippocratic *On Regimen*

2.1 *The Author and His Readers*

It is often taken for granted that medical care necessarily concerns patients and their diseases on the one hand and physicians (or other therapists) on the other.²⁰² It is also usually presupposed that (a) medical care is needed only there where someone suffers from diseases or injuries; (b) only medical professionals are competent authorities in care of health; (c) the authors of texts discussing medical topics are as a rule professionals writing instructions for other professionals on how to take care of patients; and (d) dietetics obviously constitutes an integral part of medicine (as attested most famously in *On Ancient Medicine*). These presuppositions have been applied also to the Hippocratic *On Regimen*, even though, as I argue in this chapter, they are not always appropriate. Modern translators of the text often use the expressions ‘patient’ or ‘physician’ to substitute personal pronouns or participles in passages where neither physician nor patient is necessarily intended. Scholars occasionally suggest that the author was a physician, a ‘trainer or supervisor of athletes’²⁰³ or a ‘director of a gymnasium’,²⁰⁴ even though there is no evidence to support such assumptions. Jones puts it as follows: ‘It is somewhat difficult to decide whether the author was a practicing physician or not. No passages can be quoted that are really conclusive, but the general conclusion suggested by Books II and III is that the author was a health expert, and not a professional doctor.’²⁰⁵ As a matter of fact, the author never addresses physicians nor does he (aside from a single passage in chap. 2, which I shall discuss shortly) say anything instructive about the relationship between physician and patient. There are no references to his medical practice and no case studies

201 As for the rest of the apparently unfinished text, chap. 8 discussing diseases arising from the brain is most probably a fragment from the beginning of *Morb.* 2.12 (L. 7.18–20), and the concluding chap. 9 a fragment from the beginning of *Diseases* (*Aff.* 1 = L. 6.208).

202 For the traditional view on the role of physician see the famous passage in *Epidemics* claiming that ‘the art has three factors, the disease, the patient, the physician’, and that ‘the patient must co-operate with the physician in combating the disease’ (*Epid.* 1.5 = Jones 1.11 = L. 2.636), trans. Jones.

203 Van der Eijk 2008, 401.

204 Farrington 1953, 138.

205 Jones 1931, xlvi n. 5.

which might indicate personal experience with curing patients or with training athletes. Athletic training is mentioned by analogy with iron working in chap. 13 and forcefully criticized in chap. 24 for teaching people how to break laws, deceive, trick, rob and to 'do the foulest violence most fairly'.²⁰⁶ Medicine and physicians are mentioned only in chap. 15 where the self-healing capacity of nature is illustrated with physicians' knowledge of how to 'do away with that which causes pain' and by taking away the cause of man's suffering to make him sound', and the medical procedures of 'stitching and cutting that which is rotten' are likened to those used in the art of cobbling.²⁰⁷ Moreover, neither can the extremely vague descriptions of the human body attested in the treatise corroborate any profound anatomical knowledge of its author.

All this evidence speaks against the hypothesis that the author could be identified as a doctor or gymnastic trainer.²⁰⁸ Strictly speaking, the only justifiable identification of the author's field of expertise attested in his own text is that he is a highly ambitious writer aiming to present the best and most complete account of regimen towards health, which he believes he has accomplished in his treatise. This ambition is articulated in the first two chapters, which I discuss below. But expertise in the field of dietetic prevention does not necessarily fall within the field of medicine. Partly because of the internal evidence of *On Regimen* just mentioned, and partly due to the fact that even many centuries later there were still various opinions about the status of dietetics, leading Galen to devote a whole treatise to this question (*Thrasymbulus*), arguing at length for the inclusion of dietetic prevention under the general concept of medicine.

The questions concerning the intended audience and the purpose of the treatise are even more difficult and puzzling and cannot be answered without a close and systematic reading of all related passages. Before discussing these passages, I will survey some previous suggestions. As for the intended readers, it is often presupposed that *On Regimen* addresses professionals, i.e. physicians in general,²⁰⁹ or more specifically dieticians or gymnastic trainers, who can, with the help of their expertise in dietetics, help other people to improve and

206 *Vict.* 1.24 (Joly-Byl 140.24–25 = L. 6.496), trans. Jones.

207 *Vict.* 1.15 (Joly-Byl 136.24–138.2 = L. 6.490).

208 When discussing these issues we should not forget that, as Lloyd 2003, 153 puts it, 'the gap between the doctor and the lay person was, in any case, far narrower in the ancient world, where the former had no legally recognized qualifications they could cite to justify their right to practice and where we have already seen a lay person such as Thucydides prepared to give his account of the causes of the plague'.

209 Cf. Potter 1988, 4–5.

maintain their health. Van der Eijk suggests, for instance, that the intended audience of the fourth book 'may well be dieticians or fitness trainers who can use dreams as indicative or corrective clues as to the state of a person's body and the regime to be adopted in order to prevent things from getting out of hand.'²¹⁰ Tracy proposes an attractive alternative to such a reading when maintains that the treatise as a whole 'is designed to offer a proximate guide in helping the physician, *or the patient himself*, to restore or increase the balance of these qualities and thereby to improve not only bodily health but psychological acumen as well.'²¹¹ The interesting consequence of the latter option ('or the patient himself') is that it allows us to understand a dietetic treatise as a means of direct communication between its author and his laymen readers, for whom it provides a kind of manual for dietetic self-care. Let me call this idea a 'manual hypothesis'. As a consequence of this assumption, the traditional role of physician can be reduced in *On Regimen* to (or even replaced by) written instructions which are at the disposal of anyone who can read them. While for Tracy this was only a possible alternative to the standard reading, M. Foucault takes it for granted and builds on this assumption a fascinating account of ancient dietetic care of self, which he summarizes as follows:

The relatively detailed instructions that are given by the Hippocratic regimen were meant to help the individual who familiarized himself with them to modulate his way of living according to all these variables. Regimen should not be understood as a corpus of universal and uniform rules; it was more in the nature of a manual for reacting to situations in which one might find oneself, a treatise for adjusting one's behaviour to fit the circumstances.²¹²

Foucault's approach to ancient texts is very original, idiosyncratic and not always convincing in the eyes of the readers of ancient philosophy and classics. Nevertheless, his elaboration of the manual hypothesis turns out to be well fitting and defensible, as is argued by G. Wöhrle in applying a similar reading to *On Regimen* and *On Regimen in Health*.²¹³ Accordingly, following the footsteps of Tracy, Foucault and Wöhrle, my aim is to read *On Regimen* as a kind of

²¹⁰ Van der Eijk 2004, 196.

²¹¹ Tracy 1969, 66 (my italics).

²¹² Foucault 1990, 106.

²¹³ Wöhrle 1990, 112: 'Die Diätetik gab dem Laien, dem ἰδιώτης, an den sich, wie wir sahen die beiden Schriften De victu und Salubr. ausdrücklich wenden, die Möglichkeit an die Hand, im begrenzten Maße für seine Gesundheit selbst zu sorgen ...' Wöhrle also refers to the

‘manual’ or ‘home doctor’ offering instructions on self-diagnosis and on how to be a self-help doctor who gets along without professional physicians. In place of giving instruction to doctors and dietetic trainers, the author most probably addresses ‘patients’ directly and advises them on how to ‘live a healthy life’ and how to ‘insure good health so as to prevent the approach of disease.’²¹⁴

We certainly cannot exclude the possibility that professional physicians might also learn about the method from the treatise, with a view to using it in the therapy of their patients, but there is no support in the text that this was the author’s intention and that physicians, professional dieticians or trainers were given any particular consideration. On the contrary, a number of passages indicate that the text approaches ‘the great majority of men’ (οἱ πολλοὶ τῶν ἀνθρώπων)²¹⁵ or ‘laymen’.²¹⁶ The regard to laymen is most explicit in the third book which opens as follows:

Now first of all I shall write, for the great majority of men, the means of helping such as use any ordinary food and drink, the exercises that are absolutely necessary, the walking that is necessary, and the sea-voyages required to collect the wherewithal to live—the persons who are exposed to the sun contrary to what is beneficial and to cold contrary to what is useful, making use of a regimen generally irregular. These are benefited by living as follows, so far as their circumstances allow.²¹⁷

Such ordinary people cannot radically change the regime determined by their everyday duties, but they can still at least follow simple and universal dietetic prescriptions presented in the rest of the chapter.²¹⁸ There the author divides

opening chapter of the Hippocratic *Affections* where he recognizes another example of ‘Laienmedizin als Hilfe zur Selbsthilfe’ (Wöhrle 1990, 242).

214 *Vict.* 3.67 (Joly-Byl 194.12–14 = L. 6.592).

215 *Vict.* 1.1 (Joly-Byl 122.16 = L. 6.466), 3.68 (Joly-Byl 194.17 = L. 6.594). See also *Vict.* 3.68 (Joly-Byl 194.23 = L. 6.594), 3.69 (Joly-Byl 200.23 = L. 6.604).

216 *Vict.* 3.68 (Joly-Byl 196.30 = L. 6.598).

217 *Vict.* 3.68 (Joly-Byl 194.17–22 = L. 6.594), trans. Jones (modified): Πρώτον μὲν οὖν τοῖσι πολλοῖσι τῶν ἀνθρώπων συγγράψω, ἐξ ὧν μάλιστα ἂν ὠφελεῖντο, οἵτινες σίτοισί τε καὶ πόμασι προστυχούσι χρέωνται πόνοισί τε τοῖσιν ἀναγκαίοισιν ὁδοιπορήσιν τε τῇσι πρὸς ἀνάγκας, θαλασσοργίῃσι τε τῇσι πρὸς συλλογὴν τοῦ βίου, ἡλιούμενοί τε παρὰ τὸ συμφέρον ψυχόμενοί τε παρὰ τὸ ὠφέλιμον τῇ τε ἄλλῃ διαίτῃ ἀκαταστάτῳ χρεώμενοι. τούτοις δὴ συμφέρει ἐκ τῶν ὑπαρχόντων ὥδε διαιτᾶσθαι.

218 With regard to the previous tradition reflected in the first chapters of book 1, it should be noted that chap. 38 is comparable, both in its extent and contents, to the Hippocratic *On Regimen in Health*.

the year into four seasons and then suggests universal instructions for each season, describing how one should counterbalance unfavourable seasonal conditions with the appropriate regimen in order to keep one's health in balance. Then he recommends for each season specific foods and drinks, exercises and other life activities including baths, sleep, sexual intercourse or vomiting. These dietetic prescriptions conclude with the following remark which clearly introduces another kind of readership he aims to address:

Such is my advice to the great mass of mankind, who of necessity live a haphazard life without the chance of neglecting everything to concentrate on taking care of their health. But for those who are thus favourably situated and convinced that neither wealth nor anything else is of any value without health, I have discovered a regimen that approximates to the truth as closely as is possible. What it is I will set forth in the sequel.²¹⁹

The distinction of the two kinds of readership²²⁰ has attracted the attention of more than one modern commentator. Edelstein suggests that 'this dietetic system, thus, is determined by the social contrast between rich and poor—between the active and the idle.'²²¹ Joly questions how seriously this division is meant and suggests that it follows literary rather than doctrinal concerns. He assumes that the topics discussed in the chapter are too complicated for the purposes suggested by the author, especially the division of seasons according to the settings and risings of stars, and that the variety of exercises recommended (including nocturnal walks and jogging) as well as the choice of food, which is in some cases rather luxurious, can not presuppose ordinary busy men

219 *Vict.* 3.69 (Joly-Byl 200.23–28 = L. 6.604–606), trans. Jones (modified): Ταῦτα μὲν παραινέω τῷ πλήθει τῶν ἀνθρώπων, ὅσοισιν ἐξ ἀνάγκης εἰκὴ τὸν βίον διατελεῖν ἐστὶ, μὴδ' ὑπάρχει αὐτοῖσι τῶν ἄλλων ἀμελήσασι τῆς ὑγιείης ἐπιμελεῖσθαι· οἷσι δὲ τοῦτο παρεσκεύασται καὶ διέγνωσται, ὅτι οὐδὲν ὄφελός ἐστιν οὔτε χρημάτων οὔτε τῶν ἄλλων οὐδενὸς ἄτερ τῆς ὑγιείης, πρὸς τούτους ἐστὶ μοι δῖαιτα ἐξευρημένη ὡς ἀνυστὸν πρὸς τὸ ἀληθέστατον τῶν δυνατῶν προσηγμένη. ταύτην μὲν οὖν προῖόντι τῷ λόγῳ δηλώσω.

220 In agreement with most modern commentators I assume that in chaps. 68 and 69 the author addresses two kinds of 'readers' or 'audience'. But it must be admitted, as P. van der Eijk has pointed out to me, that these passages can also be read as indicating for whom these instructions are meant, which still leaves room for the possibility that the text was meant to be read by experts of some kind. In any case, in what follows I aim at developing the 'manual hypothesis', and therefore I take the liberty to speak about readers or readership or audience, without completely ruling out alternative readings.

221 Edelstein 1967, 306.

limited in time and funds. Joly therefore suggests that by introducing two audiences the author wants to escape criticism of the sort we find in Plato's condemnation of Herodicus' dietetics, i.e. the criticism of too much concern with the care of body.²²² J. Ducatillon argues against Joly's speculation and objects that the instructions are not as complicated as the first impression suggests. The curious exercises including the night walks, she proposes, might be meant as surrogates for more usual condition training in the gymnasium, which is not always available for a man on a business trip. Accordingly, she suggests that the instructions in chap. 68 present a 'manuel simple et complet', while in the rest of book 3 the author introduces his full-blown discovery.²²³ According to Wöhrle's reading, chap. 68 does not address poor traders or craftsmen but rather those members of the wealthy class, including for instance the *metoikoi*, who may be wealthy but without the chance of neglecting everything, including their business and other duties, to concentrate solely on taking care of their health.²²⁴

In contrast to the variety of opinions on the intended audience of chap. 68, there is general agreement that the author of *On Regimen* focuses for the most part on the second group of readers who can benefit from the whole discovery described in the four books of the treatise. Those blessed are not only rich but also have unlimited leisure and, thus, no duties and obligations which would disturb their life. Such readers can buy a copy of such a treatise, devote considerable time to its study, and then spend all their days in the care of their health. Supposing that there were such readers, we can imagine also an author who aims to satisfy such a requirement.

The aim of *On Regimen* and its usefulness for the readers is explicitly spelled out in the following passage:

This discovery reflects glory on myself its discoverer, and it is useful to those who have learned it, but no one of my predecessors has even attempted to set it forth in a treatise, though I judge it to be of great value in respect of everything else.²²⁵

222 Joly 1960, 132–136.

223 Ducatillon 1969.

224 Wöhrle 1990, 85.

225 *Vict.* 3.69 (Joly-Byl 200.28–30 = L. 6.606), trans. Jones (with the variation he suggests in Jones 1931, 383 n. 1): τόδε δὲ τὸ ἐξεύρημα καλὸν μὲν ἐμοὶ τῷ εὐρόντι, ὠφέλιμον δὲ τοῖσι μαθοῦσιν, οὐδεὶς δὲ πω τῶν πρότερον οὐδὲ ἐπεχείρησε συνεῖναι [M: ξυνθεῖναι], πρὸς ἅπαντα δὲ τὰλλα κρίνω αὐτὸ εἶναι πολλοῦ ἄξιον. I read ξυνθεῖναι after manuscript M.

The claim that no predecessor has attempted to write such a treatise might be puzzling when considered alongside the references to the previous tradition in the first chapter. But supposing that the accent is put here on the discovery, whose nature will be discussed in detail in the next section, we should postpone our judgement for later debate. Neither can the claim that the dietetic account has great value ‘in respect of *everything* else’ be properly evaluated without taking into consideration a whole set of questions related to the limitations of the dietetic therapy reflected both by the author himself (which I discuss shortly) and by the philosophical audience (which is one of the topics I address in the third chapter). At any rate, it is sufficient for the moment to remember that the author promises that his dietetic account will have some utility for anyone who learns from it, without any indication that this utility is restricted to professional physicians or therapists.

The manual hypothesis I am advocating presupposes that dietetic self-care was viewed as a legitimate alternative to professional medical care, for which we have some evidence especially in the philosophical literature of the day. The idea that everyone may and should take full responsibility for his/her own health and even can be his/her own best doctor is attested for all three most important Athenian philosophers: Socrates, Plato and Aristotle.²²⁶ This does not necessarily suggest that *On Regimen* targets an exclusively philosophical audience, but there are some indications (most apparently in chaps. 4 and 5) that readers are presupposed to have a profound philosophical knowledge. In any case, as becomes clear from the following discussion, *On Regimen* certainly addresses well-educated but critically minded readers, who are open to new ideas and eager to learn more about the subject. Now and again he appeals to their wisdom, intelligence and capacity to acquire correct knowledge,²²⁷ and warns them against accepting the views of ordinary men.²²⁸ Moreover, he promises that they will achieve the best possible intelligence and memory if they correctly apply the suggested dietetic instructions.²²⁹

226 Xenophon, *Mem.* 4.7 (ed. Marchant), Plato, *Tim.* 89d, Aristotle, *EN* 1180b16. Cf. Aristotle, *Ph.* 192b21–28, 199b29–33, 257b5–6.

227 E.g. *Vict.* 1.12 (Joly-Byl 136.8 = L. 6.488); 3.71 (204.8 = L. 6.610); 4.86 (218.12–13 = L. 6.640).

228 Cf. *Vict.* 1.4 (Joly-Byl 126.28–128.3 = L. 6.474); 1.11 (134.21–136.4 = L. 6.486) and 1.24 (140.24–142.5 = L. 6.496).

229 This is, I suppose, one of the main goals of chap. 35.

2.2 *Reflections on the Earlier Dietetic Tradition*

On Regimen opens with a clear definition of its subject, which is ‘human regimen towards health’ (περὶ διαίτης ἀνθρωπίνης τῆς πρὸς ὑγίειν).²³⁰ Given the fact that dietetic restrictions were applied in various contexts and for various reasons, the first sentence may be read as the author’s specification of the tradition on which he draws and the field of expertise he aspires to represent. He clearly indicates that he will draw on a written tradition and claims that ‘many have already written (συνέγραψαν)’ on this subject.²³¹ His own ambition is to write a similar treatise, and therefore in the opening chapter he reflects on the previous tradition and explains his attitude towards his predecessors.²³² In response to the rich tradition of written accounts of dietetics he admits that some authors ‘have succeeded in one respect and others in another’, but he maintains that no one has yet successfully treated ‘the whole subject’ (τὸ ὅλον).²³³ So far, as the author complains, ‘nobody has rightly understood (ἔγνω ὀρθῶς) how these matters should be written down (συγγραπτέον)’.²³⁴ He admits that he would happily read and use such a treatise, if any of his predecessors ‘had throughout written with correct knowledge everything (πάντα διὰ παντός) that the human mind (ἀνθρωπίνη γνώμη) can comprehend about the subject’.²³⁵ Hence it is not at all to say that there would be no practising experts in the field of dietetics or that everything written on the subject was wrong. In this sentence, more than anywhere else, the author indicates the potential to write down ‘throughout everything’ about the subject, within the limits that human intellectual capacities allow, which is still far from being exhausted. He tackles not only the inappropriate knowledge concerning particular aspects of

230 *Vict.* 1.1 (Joly-Byl 122.3–4 = L. 6.466).

231 *Vict.* 1.1 (Joly-Byl 122.7 = L. 6.466), trans. Jones.

232 The Hippocratic treatises discussed in the previous sections were certainly not the only dietetic texts written in the second half of the fifth century BCE. If we can believe Suda, one of the first medical writings on the nutrition of healthy people (Περὶ τροφῆς ὑγιεινῶν) was written by Acron of Acragas, a contemporary of Empedocles (Suda, s.v. Ἀκρων = fr. 1, ed. Wellmann). Democritus (Diogenes Laertios, *Vitae* 9.48, ed. Dorandi) is also said to have written a treatise on dietetics (Περὶ διαίτης ἢ διαιτητικόν), and some of the extant fragments confirm his serious interest in matters concerning diet, even though the ethical concern is more prominent there than the medical one, as I discuss in the third chapter. Unfortunately, neither of these treatises has survived.

233 *Vict.* 1.1 (Joly-Byl 122.8 = L. 6.466), trans. Jones. To treat the ‘whole subject’ is probably what the author believes to be his own accomplishment and what he claims to be his discovery. Below I discuss this interpretation in detail.

234 *Vict.* 1.1 (Joly-Byl 122.7–8 = L. 6.466).

235 *Vict.* 1.1 (Joly-Byl 122.3–5 = L. 6.466), trans. Jones.

regimen, which may be considerably improved, but also the matters of composition and argumentation. It seems that his main point of criticism is the insufficient comprehensiveness of the previous dietetic treatises, which is a challenge the author wants to pick up.

Apart from criticizing his predecessors, he also clearly recognizes and appreciates their achievements and correct judgements. He suggests that he 'shall accept correct statements' and that it is impossible for him to write correctly by introducing the correct statements of his forerunners 'in some other way' (ἄλλως πως),²³⁶ which implies that ideas recognized as correct will be taken over in a form in which they have been originally published. This admits borrowing terminology, methods of argumentation and even verbatim quotations. It was a standard procedure in the literature of the day that authors silently adopt the ideas of other thinkers, but we rarely find this explicitly reflected as a part of the applied methodology.

As to the incorrect statements, the author believes that he would 'accomplish nothing by exposing their incorrectness'.²³⁷ Instead, he promises to 'set forth the truth about those things which have been incorrectly stated'.²³⁸ His approach here departs somewhat from the common procedure in the Classical era of criticizing and disproving opponents' views at the very beginning of a treatise. That is what we find in *On Regimen in Acute Diseases*, *On the Nature of Man*, or *On Ancient Medicine*, and many other texts of the time. His position thus deliberately deviates from the standard, as he explicitly announces and justifies. He is also unusually indulgent with his predecessors: 'None of them is blameworthy for being unable to make some discovery (ἐξευρεῖν); but all are praiseworthy for attempting the research (ζητῆσαι)'.²³⁹ In this sense he endorses a cumulative concept of knowledge which presupposes that appropriate understanding can be acquired step by step through the successive cooperation of many thinkers writing down their ideas. Not only those who have contributed something valuable to the discussion are praiseworthy, but those who were mistaken should also be appreciated for making an effort. A similar approach can be found in the Hippocratic *On Ancient Medicine*, whose author speaks about a long series of experiments and inventions concerning

236 *Vict.* 1.1 (Joly-Byl 122.12–13 = L. 6.466), trans. Jones.

237 *Vict.* 1.1 (Joly-Byl 122.13–14 = L. 6.466), trans. Jones.

238 *Vict.* 1.1 (Joly-Byl 122.19–20 = L. 6.468), trans. Jones.

239 *Vict.* 1.1 (Joly-Byl 122.9–10 = L. 6.466), trans. Jones.

food processing and their appropriate application to the specific demands of individual constitutions.²⁴⁰

The reflections on a rich tradition of dietetic literature in *On Regimen* indicate that the intended readers are expected to be well acquainted with the medical discussion of the day. Laymen could learn about medical topics not only from written accounts but also from public discussions, in which medical topics were popular and which are mentioned at the outset of *On the Nature of Man* ('Whoever is accustomed to hear speakers discuss the nature of man . . .').²⁴¹ For the sake of his own argument, this author even recommends his readers 'to be present at their discussions' in order to learn that the winner in a debate is usually the one 'who happens to have the most glib tongue in the face of the crowd'.²⁴² A similar situation may be considered also in the following suggestion in *On Regimen*:

These preliminary remarks are made for the following reasons: most men, when they have already heard one person expounding a subject, refuse to listen to those who discuss it after him, not realising that it requires the same intelligence to learn what statements are correct as to make original discoveries.²⁴³

Assuming that the author is afraid that his readers might react in exactly the way described here, this passage may serve two purposes. First, he appeals to his readers' intelligence and encourages them to compare the theories presented in *On Regimen* with those to which they have previously been exposed and to make their own unbiased judgement about their correctness. Secondly, this argument may emphasize the originality of the author despite the numerous

240 To point out also the differences between the two approaches, it should be noted that (a) the author of *On Ancient Medicine* refuses the tradition of theoretical speculation (on which the author of *On Regimen* draws heavily); and (b) he does not explicitly appreciate those who attempted to make discoveries but failed. On the cumulative concept of science in Aristotle see *Metaph.* 981b14–26 and *SE* 183a36–184b9, on the value of imperfect and misleading opinions in the cumulative development of knowledge see *Metaph.* 993b11–15.

241 *Nat. Hom.* 1 (Jouanna 164.3–4 = L. 6.32), trans. Jones (modified).

242 *Nat. Hom.* 1 (Jouanna 166.2–7 = L. 6.32–34), trans. Jones.

243 *Vict.* 1.1 (Joly-Byl 122.15–18 = L. 6.466–468), trans. Jones: διὰ τοῦτο δὲ τὸν λόγον τοῦτον προκατατίθεμαι, ὅτι οἱ πολλοὶ τῶν ἀνθρώπων, ὅταν τινὸς προτέρου ἀκούσῃσι περὶ τίνος ἐξηγευμένου, οὐκ ἀποδέχονται τὸν ὕστερον περὶ τούτων διαλεγόμενον, οὐ γινώσκοντες, ὅτι τῆς αὐτῆς ἐστὶ διανοίης γινῶναι τὰ ὁρθῶς εἰρημένα, ἐξευρεῖν τε τὰ μὴ πω εἰρημένα.

borrowings from his predecessors which appear in his account alongside his own contributions.

2.3 *Dietetic Methodology and Discovery*

In the second chapter the author announces some elementary requirements for a satisfactory account of dietetics and hereby also outlines the contents of his treatise. In response to the inadequacies of the previous dietetic accounts that he has criticised in the first chapter, he here aims at specifying what he believes to be an adequately comprehensive account of a healthy regimen and the appropriate method to be followed. He opens with the assumption that whoever aspires to 'write properly' (ὀρθῶς συγγράφειν) on human regimen must first acquire 'knowledge and discernment' (γινῶναι καὶ διαγινῶναι) of the 'nature of man in general' (παντὸς φύσιν ἀνθρώπου).²⁴⁴

Such a demand seems to be in agreement with the common standards of the time. Hippocratic authors recommending regimen as the preferable form of therapy often discuss various aspects of nature, and specifically human nature. But none of them goes into as much detail as *On Regimen*, which discusses questions concerning embryology, generation and procreation, gender difference, sleep, the body-soul distinction, etc. All these topics are discussed in considerable detail, even though, as we shall see, they do not always directly concern the dietetic goals of the author. This broader context, as I understand it and as I will discuss in detail later on (p. 111–164), is announced in the present passage as the 'nature of man in general'.

The two necessary conditions of the general knowledge of human nature mentioned in the first sentence, i.e. 'knowledge and discernment' (γινῶναι καὶ διαγινῶναι), are specified in the subsequent text as follows: first, there must be knowledge of nature's primary constituents, 'from which [parts] it is constituted from the beginning' (ἀπὸ τίνων συνέστηκεν ἐξ ἀρχῆς), for who is ignorant of the primary constitution (ἐξ ἀρχῆς σύστασιν), will be unable to gain knowledge of their effects, or more precisely of 'what comes about out of them' (τὰ ὑπ' ἐκείνων γινόμενα).²⁴⁵ Second, it is necessary to discern those components or 'parts' by which human nature is controlled (ὑπὸ τίνων μερέων κεκράτηται).²⁴⁶ If that which controls the body (τὸ ἐπικρατέον ἐν τῷ σώματι) is not discerned, it will not be possible to administer to a man things which are beneficial (τὰ συμφέροντα).²⁴⁷

²⁴⁴ *Vict.* 1.2 (Joly-Byl 122.22–23 = L. 6.468).

²⁴⁵ *Vict.* 1.2 (Joly-Byl 122.23–25 = L. 6.468).

²⁴⁶ *Vict.* 1.2 (Joly-Byl 122.24 = L. 6.468).

²⁴⁷ *Vict.* 1.2 (Joly-Byl 122.25–27 = L. 6.468).

Apart from the knowledge of the primary constituents of human nature, the author enumerates further methodological requirements for constructing an appropriate dietetic account. It is also necessary to know ‘the power (δύναμις) possessed severally by all the foods and drinks of our regimen, both the power each of them possessed by nature and the power given them by the constraint of human art’.²⁴⁸ This prerequisite is justified by the requirement to lessen the power of foods and drinks, when they are strong by nature, and to increase their power, when they are weak. This should be done by ‘seizing each opportunity as it occurs (ὅπου ἂν ὁ καιρὸς ἐκάστω παραγένηται).’²⁴⁹ The concept of *kairos*, usually understood as the fitting opportunity and time, is commonly used in ancient medical discussions and reappears in our treatise on several other occasions.²⁵⁰ It can be said that the need of appropriate timing and measure does not apply only to food but to all dietetic factors which can be modified and can thus serve therapeutic purposes.

After mentioning the alimentary aspects of human regimen, the author points out that ‘the therapy of a man is not yet sufficient’ (οὐπω αὐτάρκης ἡ θεραπείη τοῦ ἀνθρώπου), because eating alone will not keep a man healthy (διότι οὐ δύναται ἐσθίων ὁ ἄνθρωπος ὑγιαίνειν), he must also take exercise.²⁵¹ Dietetic therapy,²⁵² according to this remark, cannot be based solely on foods and drinks; it is no less important to ‘discern the power of the various exercises, both natural exercises and artificial, to know which of them tends to increase flesh and which to lessen it.’²⁵³ Keeping in mind the complexity of the discussion on food preparation, digestion and dietetic therapy in *On Ancient Medicine*, the accent on the insufficiency of a therapy dealing solely with food can be read as a criticism of dietetic approaches adopted by some of his predecessors, possibly including the author of *On Ancient Medicine*. Accordingly, great attention will be given to the powers of various exercises and activities in book 2.

After introducing exercise as a necessary precondition for the sufficient ‘discovery’ of dietetics, a new question arises, namely what is the relationship between exercises and food. This is to be answered as follows:

248 *Vict.* 1.2 (Joly-Byl 122.27–124.2 = L. 6.468), trans. Jones.

249 *Vict.* 1.2 (Joly-Byl 124.4 = L. 6.468), trans. Jones.

250 *Vict.* 1.7 (Joly-Byl 130.26–28 = L. 6.480), 2.59 (182.16 = L. 6.572), 2.66 (190.16 = L. 6.586).

251 *Vict.* 1.2 (Joly-Byl 124.4–6 = L. 6.468), trans. Jones (modified).

252 This is the first remark about a ‘therapy’ in the text and the only one—with one exception in chap. 19 (Joly-Byl 138.27–28 = L. 6.492)—which appears in the first book.

253 *Vict.* 1.2 (Joly-Byl 124.8–10 = L. 6.470), trans. Jones.

For food and exercise, while possessing opposite qualities, yet work together to produce health. For it is the nature of exercise to use up material, but of food and drink to make good deficiencies.²⁵⁴

Food and exercises are defined as opposite but complementary constituents of human diet, and this unity of opposites is spelled out in terms of symmetry or proportion (συμμετρίῃ) in the following passage, which at the same time broadens the scope by introducing other important aspects of diet:

And it is necessary, as it appears, to discern the power of the various exercises, both natural exercises and artificial, to know which of them tends to increase flesh and which to lessen it; and not only this, but also to proportion exercise to bulk of food, to the nature of the individual, to the age of the body, to the season of the year, to the changes of the winds, to local conditions, and to the constitution of the year. A man must observe the risings and settings of stars, that he may know how to watch for change and excess in food, drink, wind and the whole universe, from which diseases exist among men.²⁵⁵

By adding these dietetic factors, the whole theory becomes sufficiently comprehensive to cover all the topics commonly discussed in the field. The diagnostic value of seasonal changes including the observation of the settings and risings of stars is attested in *Airs, Waters, Places*.²⁵⁶ The dietetic instructions provided in *On Regimen in Health* are organized around seasonal changes, and the author recommends that the readers 'pay attention to age, season,

254 *Vict.* 1.2 (Joly-Byl 124.6–8 = L. 6.468–470), trans. Jones: ὑπεναντίας μὲν γὰρ ἀλλήλησιν ἔχει τὰς δυνάμεις σίτα καὶ πόνοι, συμφέρονται δὲ πρὸς ἀλλήλα πρὸς ὑγείην· πόνοι μὲν γὰρ πεφύκασιν ἀναλῶσαι τὰ ὑπάρχοντα· σιτία δὲ καὶ ποτὰ ἐκπληρῶσαι τὰ κενωθέντα.

255 *Vict.* 1.2 (Joly-Byl 124.8–17 = L. 6.470), trans. Jones (modified): δεῖ δέ, ὥς ἔοικε, τῶν πόνων διαγινώσκειν τὴν δύναμιν καὶ τῶν κατὰ φύσιν καὶ τῶν διὰ βίης γινομένων, καὶ τίνες αὐτῶν αὔξησιν παρασκευάζουσιν ἐς σάρκα καὶ τίνες ἔλλειψιν, καὶ οὐ μόνον ταῦτα, ἀλλὰ καὶ τὰς συμμετρίας τῶν πόνων πρὸς τὸ πλῆθος τῶν σιτίων καὶ τὴν φύσιν τοῦ ἀνθρώπου καὶ τὰς ἡλικίας τῶν σωμάτων, καὶ πρὸς τὰς ὥρας τοῦ ἐνιαυτοῦ καὶ πρὸς τὰς μεταβολὰς τῶν πνευμάτων, πρὸς τε τὰς θέσιας τῶν χωρίων, ἐν οἷσι διαιτῶνται, πρὸς τε τὴν κατάστασιν τοῦ ἐνιαυτοῦ. ἄστρον τε ἐπιτολὰς καὶ δύσιας γινώσκειν δεῖ, ὅπως ἐπίστηται τὰς μεταβολὰς καὶ ὑπερβολὰς φυλάσσειν καὶ σίτων καὶ ποτῶν καὶ πνευμάτων καὶ τοῦ ὅλου κόσμου, ἐξ ὧν περ τοῖσιν ἀνθρώποισιν αἱ νοῦσοί εἰσι.

256 *Cf. Aër.* 2 (Diller 26.13–15 = L. 2.14), 10 (Diller 46.16–52.14 = L. 2.42–50) and 11 (Diller 52.15–54.3 = L. 2.50–52).

habit, land, and physique, and counteract the prevailing heat or cold'.²⁵⁷ In the *Aphorisms* we read that 'attention should also be paid to the seasons, the regions, habit and age',²⁵⁸ and the author of *On the Nature of Man* proposes that changes in drugging or in regimen should 'suit the several conditions of age, season, physique and disease'.²⁵⁹

It is apparently the ambition of the author of *On Regimen* to incorporate into his own dietetic theory as many diagnostic factors introduced by his predecessors as possible. This holds also for the concept of disease mentioned by the author of *On the Nature of Man*, which is nevertheless rendered in *On Regimen* in a way that is considerably different from the other accounts. Diseases, which 'exist among men' from changes and excess food, drink, wind and 'the whole universe', are not treated as independent agents, they are rather consequences of a long-lasting imbalance of all the dietetic variables. Their diagnostic value is diminished by the fact that by the time they become evident, it is often already too late for a dietetic treatment. As he remarks in chap. 67, when a disease bursts out, 'there is need of drugs, while some there are that not even drugs can cure'.²⁶⁰ As the author assumes, 'diseases do not arise among men all at once; they gather themselves together gradually before appearing with a sudden spring',²⁶¹ and he suggests therefore careful observation not of symptoms of diseases but rather of the imbalance between the dietetic variables, and especially between food and exercise. If there occurs 'even a small deficiency of one or the other, in the course of time the body must be overpowered by the excess and fall sick'.²⁶² The continuity between a healthy condition and disease is clearly attested in the discussion of concrete diagnoses and dietetic prescriptions in chaps. 70–83. In short, *On Regimen* does not suggest a therapy of diseases but rather a therapy for men in a state of pathogenic imbalance.²⁶³

After enumerating all the dietetic factors which need to be included in the account, a considerable limitation is announced: 'But even when all this is discerned', says the author after explaining the necessity of finding out the proportion between all the dietetic variables discussed so far (i.e. food, exercise,

257 *Salubr.* 2 (= *Nat. Hom.* 17 in Jouanna 208.18–20 = L. 6.76), trans. Jones: δεῖ οὖν πρὸς τὴν ἡλικίαν καὶ τὴν ὥρην καὶ [τὸ ἔθος καὶ τὴν χώραν καὶ] τὰ εἶδεα τὰ διαιτήματα ποιεῖσθαι ἐναντιούμενον τοῖσι καθισταμένοισι καὶ θάλλεσι καὶ χειμῶσιν. After Littré and Jones I read τὸ ἔθος καὶ τὴν χώραν καὶ, which Jouanna does not accept.

258 *Aph.* 1.17 (L 4.468).

259 *Nat. Hom.* 9 (Jouanna 190.11–12 = L. 6.54), trans. Jones.

260 *Vict.* 3.67 (Joly-Byl 194.14–15 = L. 6.592–594), trans. Jones.

261 *Vict.* 1.2 (Joly-Byl 124.29–126.1 = L. 6.472), trans. Jones.

262 *Vict.* 1.2 (Joly-Byl 124.24–26 = L. 6.470–472), trans. Jones.

263 Cf. Wöhrle 1990, 83.

wind, etc., and the whole universe), ‘the discovery is not yet sufficient (οὐπω αὐταρχες τὸ εὖρημά ἐστιν).’²⁶⁴ Given the fact that most essential components of the dietetic theory have already been mentioned and nothing substantial needs to be added, this seems to be a rather surprising and puzzling claim. But compared with the insufficiency concerning therapy mentioned a few lines above,²⁶⁵ this time he speaks about insufficient ‘discovery’ which concerns, as I understand it, the comprehensiveness of a written dietetic account. More can be learned about this limitation from the following lines:

If indeed in addition to these things it were possible to discover for the constitution of each individual the due measure of food (μέτρον) and the proportionate amount (ἀριθμὸς σύμμετρος) of exercise, with no inaccuracy either of excess or of defect, an exact discovery of health for men would have been made (εὖρητο ἂν ἡ ὑγείη τοῖσιν ἀνθρώποισιν ἀκριβέως). But as it is, although all things previously mentioned have been discovered, this last discovery cannot be made (τοῦτο δὲ ἀδύνατον εὖρεῖν).²⁶⁶

The desirable but unrealistic goal mentioned in this passage is to provide exact instructions concerning the balance between food and exercise for an individual constitution. Who is the concrete individual taken into consideration here? It is most obviously his potential reader, I suggest, who is addressed and informed about some limitations of the dietetic manual. On this reading, even the most perfectly written instructions would be sufficient for its readers only if it could provide exact instructions on food and exercises fitting to each individual reader. The author does not exclude the possibility of diagnosing an individual condition with such a precision that exact measure (μέτρον) or even ‘quantification’ of the proportion (ἀριθμὸς σύμμετρος) between food and exercise can be defined. Indeed, this would be possible under the following conditions:

Now if one were present and saw, he would have knowledge of the man as he stripped and practised his exercises, so as to keep him in health by taking away here and adding there. But without being present it is impossible (ἀδύνατον) to prescribe (ὑποθέσθαι) the exact (ἐξ ἀκριβείην) amount of food and exercise.²⁶⁷

²⁶⁴ *Vict.* 1.2 (Joly-Byl 124.17 = L. 6.470), trans. Jones (modified).

²⁶⁵ *Vict.* 1.2 (Joly-Byl 124.4–6 = L. 6.468).

²⁶⁶ *Vict.* 1.2 (Joly-Byl 124.17–20 = L. 6.470), trans. Jones (modified).

²⁶⁷ *Vict.* 1.2 (Joly-Byl 124.21–24 = L. 6.470), trans. Jones (modified).

We can certainly imagine a wealthy man hiring a private dietician who would watch him in his daily regimen and prescribe exact instructions on how to keep in health. This does not at all seem to be an unrealistic option, supposing that there were such experts available.²⁶⁸ But ‘without being present’, as the author clearly specifies, it is impossible to prescribe exact amount of food and exercises. Assuming that the author is not promoting himself as a mercenary dietetic supervisor and that his specific aim is to provide a dietetic manual useful for any reader, the disclaimer mentioned in this passage concerns the specific relationship between the author and the reader who seeks for such information in order to apply them in his own dietetic self-care. And considering such a relationship, it is impossible for the author to provide for each of his readers a tailor-made regimen fitting the specific demands of each individual constitution and condition. All that he can provide are instructions on how one can care for one’s own health, but without suggesting exact prescriptions which would need no adjustments in particular cases. As a matter of fact, such accuracy is not at all necessary for achieving satisfactory results in therapy, as we can see in chap. 67, which I shall discuss shortly.

As for the present discussion, after introducing the limitation concerning accuracy, the author admits that ‘even though the other investigators have attempted to carry their research up to this point, they have not gone on to set them forth.’²⁶⁹ If it were possible to find out exactly what is meant by the phrase ‘up to this point’ (μέχρι τούτου), the history of dietetics could have been revealed in a much sharper form and the concept of the proclaimed discovery would also have become more legible and less ambiguous. Supposing that it refers to all that has been said in the previous lines, it suggests that each of the various dietetic factors has already been discussed by some predecessor or predecessors, and accordingly the novelty of the author consists of the appropriate systematic combination of all already known dietetic factors rather than

268 Wöhrle 1990, 112 assumes that the interest in the self-care of health was caused by the lack of physicians available, ‘besonders in früherer Zeit’. This lack of physicians has been suggested by Cohn-Haft 1956, 23–31.

269 *Vict.* 1.2 (Joly-Byl 124.26–28 = L. 6.472), trans. Jones (modified): τοῖσι μὲν οὖν ἄλλοισι μέχρι τούτου ἐπιτελείρηται ζητηθῆναι· εἴρηται δὲ οὐδὲ ταῦτα <ὀρθῶς>. The reading of the last sentence is unclear, namely because of the verb εἴρηται, which is attested in both main manuscripts. Diels suggests replacing it with εὔρηται and adds ὀρθῶς, Joly leaves the manuscript εἴρηται but accepts Diels’ addition ὀρθῶς and translates: ‘mais ils n’ont même pas dit ces choses exactement’. Supposing that the author is still referring to his predecessors writing on the subject, he may be saying that none of them presented the topic in a satisfactory way, i.e. as precisely as human means permit (cf. *Vict.* 4.93, Joly-Byl 230.12 = L. 6.662).

of a particular topic newly introduced into the discussion. This achievement is expressed in terms of discovery in the following passage, which moreover introduces prognostics as an additional topic of the treatise:

But I have discovered these things, as well as (καί) the forecasting of an illness before the patient falls sick, based upon the direction in which is the excess.²⁷⁰

It is necessary to lay stress on the connector καί, since this distinguishes an appropriate diagnosis of each individual condition according to all relevant dietetic variables, which previous authors have tried to achieve but have never succeeded in encompassing in its entirety on the one hand, and the forecasting (προδιάγνωσις), which will be further specified in books 3 and 4, on the other.

The exposé of the method and contents of the treatise presented in chap. 2 concludes with a clear explanation of the author's resolution:

So I have discovered the symptoms shown in a patient before health is mastered by disease, and how these are to be replaced by a state of health. When to the things already written this also has been added, the task I have set before myself will be accomplished.²⁷¹

Hence we have seen so far three clearly distinguishable items on the list of discoveries: (1) diagnosis of the individual condition based on the proper observation of various dietetic variables, (2) therapy, i.e. the practical knowledge of dietetic procedures applicable for each individual case ('how these are to be replaced by a state of health'), and (3) pro-diagnosis, which is introduced in this passage for the first time. These three are the constitutive elements of the discovery announced in the second chapter of book 1. But before drawing a conclusion on the nature of the proclaimed discovery in the whole treatise, I will briefly survey all the passages in books 2–4 relevant to the discussion.

Towards the end of book 2, where the author discusses in detail the nature and situation of various inhabited places, the nature and power of particular winds, and the properties of individual foodstuffs, drinks and exercises, he diagnoses a condition in which exercises overpower foods and cause fatigue

270 *Vict.* 1.2 (Joly-Byl 124.28–29 = L. 6.472), trans. Jones: ἔμοι δὲ ταῦτα ἐξεύρηται, καὶ πρὸ τοῦ κάμνειν τὸν ἀνθρώπον ἀπὸ τῆς ὑπερβολῆς, ἐφ' ὅπότερον ἂν γένηται, προδιάγνωσις.

271 *Vict.* 1.2 (Joly-Byl 126.2–4 = L. 6.472), trans. Jones: πρὶν οὖν κρατεῖσθαι ἐν τῷ ἀνθρώπῳ τὸ ὑγιὲς ὑπὸ τοῦ νοσηροῦ, ἃ πάσχουσιν ἐξεύρηταί μοι, καὶ ὅπως χρῆ ταῦτα καθιστάναι ἐς τὴν ὑγίειν. τοῦτου δὲ προσγενομένου πρὸς τοῖσι γεγραμμένοισι, τελευτᾷ τὸ ἐπιχειρήμα τῶν διανοημάτων.

pain²⁷² and suggests a treatment consisting of moistening a body which has been excessively dried.²⁷³ On this occasion he turns back to the limitations of the dietetic account, which are specified as follows (chap. 66):

Now if it were possible to find out the amount of the excess and cure it by an appropriate amount (τῇ συμμετρίῃ) of food, all would be well thus. But as it is, this is impossible (τὸ μὲν ἀδύνατον), but the other course is easy (τὸ δὲ ῥῆϊδιον). For the body, in a state of dryness, after the entrance of all sorts of food, draws to itself what is beneficial from the several foods for the several parts of the body; on being filled and moistened, the belly having been emptied by the emetic, it casts away the excess, while the belly, being empty, exercises a revulsion. So the flesh rejects the excessive moisture, but it does not cast away that which is of an appropriate amount (τὸ δὲ σύμμετρον), unless it be under the constraint of drugs, of exercises, or of some revulsion. By employing gradation, you will restore the body gently to its old regimen.²⁷⁴

Here again we read that the appropriate balance, which is this time expressed as the symmetry between the excessive exercises and the food which should counterbalance it, cannot be defined (τὸ μὲν ἀδύνατον), nevertheless there is still an easy way to treat it (τὸ δὲ ῥῆϊδιον) consisting of the gradual restoration of health by counterbalancing the surplus of dryness through various moistening procedures. On the face of it, one might get the impression that it is absolutely impossible to make an exact diagnosis and therefore only a stochastic approach is available. But, as I have already suggested in the discussion of the parallel passages in chap. 2, the impossibility of defining accurate symmetry may reflect the fact that in the written treatise only general instructions can be provided and these always need appropriate adjustments to individual

272 *Vict.* 2.66 (Joly-Byl 190.14–15 = L. 6.586).

273 *Vict.* 2.66 (Joly-Byl 190.24–25 = L. 6.586–588).

274 *Vict.* 2.66 (Joly-Byl 190.25–192.3 = L. 6.588), trans. Jones: εἰ μὲν οὖν δυνατόν ἦν, τὴν ὑπερβολὴν τοῦ πόνου γνόντα ὅση τις ἐστί, τοῦ σίτου τῇ συμμετρίῃ ἀκέσασθαι, εὖ ἂν εἶχεν οὕτω· νῦν δὲ τὸ μὲν ἀδύνατον, τὸ δὲ ῥῆϊδιον· ἐξηρασμένον γὰρ τὸ σῶμα, σίτων ἐμπεσόντων παντοδαπῶν ἔλκει τὸ σύμφορον αὐτὸ ἐωυτῷ ἕκαστον τοῦ σώματος ἑκάστου σίτου, πληρωθὲν δὲ καὶ ὑγρανθὲν, κενωθείσης τῆς κοιλίης ὑπὸ τοῦ ἐμέτου ἀφίησι πάλιν τὴν ὑπερβολὴν· ἢ δὲ κοιλίη κενεὴ ἐοῦσα ἀντισπᾶ. τὸ μὲν οὖν υπερβάλλον ὑγρὸν ἐξερεύγεται ἢ σάρξ, τὸ δὲ σύμμετρον οὐκ ἀφίησιν, εἰ μὴ διὰ βίης ἢ πόνων ἢ φαρμάκων ἢ ἄλλης τινὸς ἀντισπάσιος. τῇ δὲ προσαγωγῇ χρησάμενος καταστήσεις τὸ σῶμα ἐς τὴν ἀρχαίην δίαίταν ἡσυχῇ.

situations.²⁷⁵ Accordingly, in principle it is not unfeasible to achieve accuracy, as we already know from chap. 2, but it is not possible to provide an exact diagnosis ‘without being present’ and therefore it is impossible to write it down in a treatise. This reading is supported by the following passage in chap. 67, which opens book 3:

As I have said above, it is impossible to write about the regimen of men with such precision as to make the exercises proportionate (*συμμετρίην*) to the amount of food. There are many things to prevent this.²⁷⁶

The third book is entirely devoted to practical therapeutic instructions, and it is therefore understandable that the author feels the need to recapitulate the most important principles of his theory at its beginning. After reminding his readers about the impossibility of writing down precise instructions, he provides a brief list of the dietetic factors one has to take into consideration when diagnosing individual conditions, which were discussed in detail at the beginning of book 1. His summary reads as follows:

First, the constitutions of men differ; dry constitutions, for instance, are more or less dry when compared with themselves or when compared with one another. Similarly with moist constitutions, or with those of any other kind. Then the various ages have different needs. Moreover, there are the situations of districts, the shiftings of the winds, the changes of the seasons, and the constitution of the year. Foods themselves exhibit many differences; the differences between wheat and wheat, wine and wine, and those of the various other articles of diet, all prevent its being possible to lay down rigidly exact rules in writing.²⁷⁷

275 As Aristotle (*EN* 1103b34–1104a11) suggests, the limited accuracy and the need of dealing with particular cases of conduct bring together the art of medicine with philosophical ethics (and the art of navigation).

276 *Vict.* 3.67 (Joly-Byl 194.2–4 = L. 6.592), trans. Jones (modified): Περὶ δὲ διαίτης ἀνθρωπίνης, ὥσπερ μοι καὶ πρόσθεν εἴρηται, συγγράψαι μὲν οὐχ οἶόν τε ἐς ἀκριβείην, ὥστε πρὸς τὸ πλήθος τοῦ σίτου τὴν συμμετρίην τῶν πόνων ποιεῖσθαι. πολλὰ γὰρ τὰ καλύοντα.

277 *Vict.* 3.67 (Joly-Byl 194.4–10 = L. 6.592), trans. Jones (modified): πρῶτον μὲν αἱ φύσεις τῶν ἀνθρώπων διάφοροι ἐοῦσαι· καὶ γὰρ ξηραὶ αὐταὶ ἐωυτῶν πρὸς ἐωυτάς καὶ πρὸς ἀλλήλας μᾶλλον καὶ ἥσσον καὶ ὑγραὶ ὡσαύτως, καὶ αἱ ἄλλαι πάσαι. ἔπειτα αἱ ἡλικίαι οὐ τῶν αὐτῶν δεόμεναι· ἔτι δὲ καὶ τῶν χωρίων αἱ θέσεις καὶ τῶν πνευμάτων αἱ μεταβολαὶ τῶν τε ὥρέων αἱ μεταστάσεις καὶ τοῦ ἐνιαυτοῦ αἱ καταστάσεις. αὐτῶν τε τῶν σίτων πολλὴ διαφορὴ· πυροὶ τε γὰρ πυρῶν καὶ οἶνος οἶνου καὶ τᾶλλα, ὅσα διαιτῶμεθα, πάντα διάφορα ἐόντα ἀποκωλύει μὴ δυνατόν εἶναι ἐς ἀκριβείην συγγραφῆναι.

Following the same strategy as in chap. 2, the author first specifies the obstacles preventing him from providing his readers with exact dietetic instructions, and then specifies what he can offer them instead and of what his discovery consists. He repeats his discovery once again in the following way:

But the discovery that I have made is how to diagnose what overpowers in the body, whether exercises overpower foods, or the foods overpower exercises; how to cure each excess, and to insure good health (προκαταλαμβάνειν τὴν ὑγίειν) so as to prevent the approach of diseases, unless very serious and many blunders be made. In such cases there is need of drugs, while there are some that not even drugs can cure. So as far as it is possible to make discoveries, to the utmost limit my discoveries have been made, but absolute accuracy has been attained by nobody.²⁷⁸

The three aspects of the discovery I have identified in chap. 2 are repeated in this passage: (1) the diagnosis of individual conditions in terms of the predominance of exercises over food (i.e. as we learn in chaps. 3 and 4, movement and activity over nutrition, or drying hotness over cooling moistness), (2) the allopathic therapy, and (3) the prevention. The prevention is here expressed by the phrase προκαταλαμβάνειν τὴν ὑγίειν, although other formulations appear elsewhere in the text, such as πρὸ τοῦ κάμνειν . . . προδιάγνωσις in the second chapter²⁷⁹ and the phrase χρή προμηθεῖσθαι, which appears frequently in the practical advice on dietetic therapy in books 3 and 4.²⁸⁰ All these expressions employ the prefix προ- which signifies, I take it, the essence of preventive care, i.e. to start with the therapy of imbalance *before* diseases occur.

This is also what we read two chapters later (in chap. 69), when the author reiterates the essentials of his discovery one more time:

It [i.e. the discovery] comprises prognosis (προδιάγνωσις) before illness and diagnosis (διάγνωσις) of what is the matter with the body, whether

278 Vict. 3.67 (Joly-Byl 194.10–16 = L. 6.592–594), trans. Jones (modified): ἀλλὰ γὰρ αἱ διαγνώσεις ἔμοιγε ἐξευρημέναι εἰσὶ τῶν ἐπικρατούντων ἐν τῷ σώματι, ἣν τε οἱ πόνοι ἐπικρατέωσι τῶν σίτων, ἣν τε τὰ σίτα τῶν πόνων, καὶ ὡς χρή ἕκαστα ἐξακεῖσθαι προκαταλαμβάνειν τε ὑγίειν, ὥστε τὰς νούσους μὴ προσπελάζειν, εἰ μὴ τις πάνυ μεγάλη ἐξαμαρτάνοι καὶ πολλάκις· ταῦτα δὲ φαρμάκων δεῖται ἥδη, ἔστι δὲ ἄσσα οὐδὲ ὑπὸ τῶν φαρμάκων δύναται ὑγιάζεσθαι. ὡς μὲν οὖν δυνατόν εὑρεθῆναι, ἔγγιστα τοῦ ὅρου ἐμοὶ εὔρηται, τὸ δ' ἀκριβὲς οὐδενί.

279 Vict. 1.2 (Joly-Byl 124.28–29 = L. 6.472).

280 Vict. 3.72 (Joly-Byl 204.16 = L. 6.612), Vict. 3.72 (204.33 = L. 6.612), Vict. 3.74 (206.23 = L. 6.616), Vict. 3.76 (208.16 = L. 6.618), Vict. 3.79 (210.28–29 = L. 6.624), Vict. 3.81 (212.27 = L. 6.628), Vict. 3.82 (214.17 = L. 6.630), Vict. 4.89 (224.25 = L. 6.652).

food overpowers exercise, whether exercise overpowers food, or whether the two are duly proportioned (μετρίως ἔχει πρὸς ἄλληλα). For it is from the overpowering of one or the other that diseases arise, while from their being evenly balanced (ἀπὸ δὲ τοῦ ἰσάζειν πρὸς ἄλληλα) comes good health. Now these different conditions I will set forth, and explain their nature and their arising in men who appear to be in health, eat with an appetite, can take their exercise, and are in a good condition and of a healthy complexion.²⁸¹

It is notable that the concept of balance is expressed in chaps. 67 and 69 by three different terms. It is (a) the symmetry (συμμετρίῃ) between food and exercise, which is practically unattainable, (b) the mutual proportion (μετρίως ἔχει πρὸς ἄλληλα) between food and exercise, and (c) the capacity to equalize (ἰσάζειν) them with one another and bring back health. In the concluding chapter of the book the author says that in order to get rid of the unfavourable excess of food over exercise it is necessary to restore due balance or 'equality' (ἀνισάζειν οὖν χρῆ),²⁸² which captures the main therapeutic principle applied in the whole book.²⁸³

In the fourth book, which is devoted to dream diagnosis as an additional means to recognize an imbalanced state of the body, the author does not speak about his discovery until the very last sentence. There he concludes the account of the whole treatise by saying:

Using these means in the way I have described a man will live a healthy life: in fact I have discovered regimen, with the gods' help, as far as it is possible for mere man to discover it.²⁸⁴

281 *Vict.* 3.69 (Joly-Byl 200.30–202.4 = L. 6.606), trans. Jones: ἔστι δὲ προδιάγνωσις μὲν πρὸ τοῦ κάμνειν, διάγνωσις δὲ τῶν σωμάτων τί πέπονθε, πότερον τὸ σιτίον κρατεῖ τοὺς πόνους ἢ οἱ πόνοι τὰ σιτία ἢ μετρίως ἔχει πρὸς ἄλληλα. ἀπὸ μὲν γὰρ τοῦ κρατεῖσθαι ὁποτερονοῦν νοῦσοι ἐγγίνονται· ἀπὸ δὲ τοῦ ἰσάζειν πρὸς ἄλληλα ὑγίειν πρόσσεστιν. ἐπὶ ταῦτα δὴ τὰ εἶδεα ἐπέξειμι, καὶ δεῖξω, οἷά ἐστι καὶ γίνεται τοῖσιν ἀνθρώποισιν ὑγιαίνειν δοκέουσι καὶ ἐσθίουσιν ἡδέως πονεῖν τε δυναμένοισι καὶ σώματος καὶ χρώματος ἱκανῶς ἔχουσιν.

282 *Vict.* 3.85 (Joly-Byl 216.28 = L. 6.636).

283 The same verb (ἀνισάζειν), which occurs in no other book of the treatise, is also employed in chap. 68 where it expresses the balance between boiled and roasted meats recommended for spring season (*Vict.* 3.68, Joly-Byl 198.22 = L. 6.600).

284 *Vict.* 4.93 (Joly-Byl 230.11–12 = L. 6.662), trans. Jones: τούτοιςι χρεώμενος, ὡς γέγραπται, ὑγιαίνει τὸν βίον. καὶ εὐρηταί μοι διαίτα ὡς δυνατόν εὐρεῖν ἀνθρώπον ἐόντα σὺν τοῖσι θεοῖσι.

I have hopefully succeeded in showing that the proclaimed discovery of *On Regimen* is comprised by three distinct, but closely connected, aspects: diagnosis, therapy and pro-diagnosis. Each of these has previously been suggested as the essence of the discovery: Fredrich holds that the 'Erfindung des Compilators' rests in the diagnosis concerning the prevalence of food or exercises.²⁸⁵ Peck highlights the therapeutic contribution, namely the expression of health-factors in their fire-and-water which allows 'precautionary' treatment, and the work therefore 'culminates in twenty-four chapters (chaps. 70–93)'.²⁸⁶ According to Jones' opinion, the discovery 'is clearly identified with προδιάγνωσις, how to tell beforehand, by symptoms, whether food or exercise is in excess, and by so doing προκαταλαμβάνειν τὴν ὑγείην'.²⁸⁷ He even maintains that the author was 'the father of preventive medicine' and that his merit is all the greater 'when we remember that the most famous Hippocratic works know nothing of προδιάγνωσις but only of πρόγνωσις'.²⁸⁸ Van der Eijk holds, along the same lines, that what the author of *On Regimen* claims as his own innovation 'is the prophylactic use of dietetics based on prognosis . . .'.²⁸⁹ Moreover, he also proposes that the author 'clearly thinks of himself as one of the first to make use of dreams for his prognostic purpose and thus for the enhancement of this status'.²⁹⁰

None of these scholars insists on separating the one aspect he prefers from the others, but as far as I am aware, no one has yet argued for the importance of all of them. As for their particular suggestions, let me introduce some possible objections. First, the absence of preventive concerns in other Hippocratic authors cannot be inferred from the fact that they do not use the expression προδιάγνωσις, which is a neologism introduced by the author of *On Regimen*.²⁹¹ Neither Diocles nor Galen, who themselves deal with dietetic prophylaxis, make use of this expression. This terminological idiosyncrasy should not therefore be confused with conceptual innovation, i.e. with the invention of dietetic prophylaxis.

Second, the preventive approach is clearly attested in the other Hippocratic authors as well. When we read in *On Regimen in Health*, for instance, that it is

285 Fredrich 1899, 192.

286 Peck 1928, 54.

287 Jones 1931, xlii–xliii. Cf. Craik 2015, 270 and 273.

288 Jones 1931, l.

289 Van der Eijk 2004, 206 n. 72 (cf. also p. 187).

290 Van der Eijk 2004, 195. Cf. Wöhrle 1990, 83 identifying the author's discovery with 'die Prodiagnose heraufziehender Krankheiten'.

291 Cf. Craik 2015, 273. As far as I am aware, in the Classical era only Thucydides (5.38.3.9, ed. Jones and Powell) uses the verb προδιαγιγνώσκω, in meaning 'to prejudge' or 'to understand beforehand'.

possible to counteract the prevailing heat or cold by dietetic means and that 'in this way will the best health be enjoyed',²⁹² we can hardly deny the preventive concerns of the theory. The author of *On Ancient Medicine* even holds that the preventive aspect 'arose first' and preceded the therapeutic one: first there were the ancients who 'originally discovered and prepared for all human beings the nourishment we make use of today' and who 'sought to do away with those things which, when taken, the constitution of man in health could not assimilate on account of their brutish and uncompounded character'.²⁹³ Only after these discoveries had been made did physicians enter the scene, using the same dietetic method and seeking 'to do away with those foods which each sick person, in whatever condition he happened to be, could not overcome'.²⁹⁴ Nor is there any doubt that the author of *Regimen in Acute Diseases* takes the preventive aspect into consideration when proposing that his method can serve also for 'preservation of health to those who are well, good condition to athletes in training, and in fact realization of each man's particular desire'.²⁹⁵ Since it is very unlikely that all these authors would write after *On Regimen* or that the author would simply ignore them (despite the long introductory reflections on the dietetic tradition), I am convinced that preventive concerns are naturally implied in the whole field of 'dietetics towards health', which the author reflects and aims to bring to perfection.

Third, even though the dream diagnosis discussed in book 4 certainly belongs to the concept of pro-diagnosis, it should not be reduced to it for the following reasons: (a) the preventive treatment articulated in chaps. 69–83, which sufficiently brings the concept of pro-diagnosis into practice, does not take dreams into consideration, (b) the author explicitly connects dream diagnosis neither with pro-diagnosis nor with his discovery (even though the concluding passage in chap. 93 indicates that the topic of the fourth book should also be included in the overall discovery). Also, (c) the author nowhere claims to be the first one to use dream diagnosis. Whether or not it is true, historically speaking, it cannot be taken as his own claim.

On the other hand, it is still reasonable to esteem the author as 'the father of preventive medicine', but only in the sense that he was most probably the first author proposing a theoretically grounded complex account of dietetics. Bearing in mind his initial remarks on his predecessors who have already attempted to write on dietetics even though none of them has succeeded to

292 *Salubr.* 2 (= *Nat. Hom.* 17 in Jouanna 208.20 = L. 6.76), trans. Jones: οὕτω γὰρ ἂν μάλιστα ὑγιαίνοισιν.

293 *VM* 7 (Jouanna 126.6–8 = L. 1.584), trans. Schiefsky.

294 *VM* 7 (Jouanna 126.12–14 = L. 1.584), trans. Schiefsky.

295 *Acut.* 9 (Joly 39.23–40.1 = L. 2.244), trans. Jones.

treat 'the whole', and also keeping in mind the passages where the particular attempts of his forerunners were contrasted with his own discovery, it can be assumed that the whole complex theory written down in a form of treatise is what he proudly announces as his discovery and what he indicates when concluding the whole treatise by saying 'I have discovered regimen'. In this sense his discovery can be understood as the climax or crowning achievement of dietetics as a whole.²⁹⁶ Since 'nobody has rightly understood *how* these matters should be written down',²⁹⁷ we should pay attention also to the form, structure and argument of the whole treatise. As I will try to illustrate, partly in the following section and partly in the next chapter, the author aims not only at providing useful instructions for dietetic therapy and prevention, written with the highest achievable precision, but also at delivering a theoretically elaborated account of human nature grounded on the most influential cosmological and philosophical conceptions of the day.

Before proceeding to this discussion, let me sketch an outline of the whole dietetic treatise and indicate where the essential dietetic topics mentioned in the second chapter have found their place in the treatise. If we add to these topics several others which appear later in the text and also prove to be important for the dietetic theory, the following table of contents can be suggested:

- (1) The 'nature of man' in general
 - (a) the original constituents (chaps. 3–4)
 - (b) theoretical principles (introduced in chaps. 4–5, illustrated in chaps. 11–24)
 - (c) embryology and procreation (chaps. 6–10, 25–31)
- (2) Unchangeable variables
 - (a) seasons (rising and setting of stars) (chap. 68)
 - (b) individual constitution (chaps. 32 and 35–36)
 - (c) sex difference (chap. 34)
 - (d) age (chap. 33)
 - (e) winds (chap. 38)
 - (f) districts (chap. 37)
 - (g) state or constitution of the year²⁹⁸

296 Joly 1960, 12, Joly-Byl 2003, 24, Smith 1980, 440.

297 *Vict.* 1.1 (Joly-Byl 122.7–8 = L. 6.466).

298 Though this dietetic variable is announced in chap. 2 (*Vict.* 1.2, Joly-Byl 124.14 = L. 6.470: πρὸς τε τὴν κατὰστασιν τοῦ ἐνιαυτοῦ) and again in chap. 67 (*Vict.* 3.67, Joly-Byl 194.8 = L. 6.592: τοῦ ἐνιαυτοῦ αἱ καταστάσεις), nowhere in the treatise it is discussed in detail.

(3) Adjustable variables

(a) Qualities of foodstuffs

Introductory methodological remarks (chap. 39)

Vegetable:

Barley (chap. 40)

Cyceon (chap. 41)

Wheats (chap. 42)

Spelts and oats (chap. 43)

Fresh and stale food (chap. 44)

Beans, peas, chick-pea, millet, figs, lentils, and various other vegetables and spices (chap. 45)

Vegetables and herbs (chap. 54)

Fruits and seeds (chap. 55)

Animal:

Beef, pork, lamb, meet of goat, ass, horse, dog, wild boar, deer, hare, fox, hedgehog (chap. 46)

Birds (chap. 47)

Fish and other water animals (chap. 48)

Tame and wild animals (chap. 49)

Eggs (chap. 50)

Cheese (chap. 51)

Honey (chap. 53)

Meat preparation and various instructions and theoretical considerations (chap. 56)

Drinks (chap. 52)

(b) Daily activities and exercises

Baths (chap. 57)

Oiling (chap. 58)

Vomiting (chap. 59)

Sleep (chap. 60)

Soul activities: sight, hearing, thoughts, speech, singing (chap. 61)

Walks (chap. 62)

Runs (chap. 63)

Joly-Byl 2003, 24 refer to book 3, chap. 68, but I can find no traces of this discussion there; the seasonal changes seem to be treated there as perfectly regular, with no hint of the possibility that each year has a peculiar character.

- Swinging the arms, wrestling and holding the breath (chap. 64)
- Dust and oil applied in exercises (chap. 65)
- Trained and untrained bodies (chap. 66)
- Sexual activities (particular instructions are given in chaps. 68, 73, 80, 84)
- (4) Dietetic manual for people constrained by circumstances (chap. 67)
- (5) Diagnosis and treatment of the asymmetry between food and exercise (chaps. 70–85)
- (6) Diagnosis from dreams
 - (a) The significance of dreams (chap. 86)
 - (b) Prophetic vs. diagnostic dreams (chap. 87)
 - (c) The signs of health and disease (chap. 88)
 - (d) Dreams of celestial phenomena (chap. 89)
 - (e) Dreams of terrestrial phenomena (chap. 90)
 - (f) Self-reflective dreams (chap. 91)
 - (g) Dreams where the dead appear (chap. 92)
 - (h) Other dreams (chap. 93)

2.4 *The Original Constituents*

The author of *On Regimen* demands in chap. 2 that whoever wants to write on human regimen ‘must first acquire knowledge and discernment of the nature of man in general’ (παντὸς φύσιν ἀνθρώπου), which means for him first to recognize nature’s ‘primary constituents’ (ἀπὸ τίνων συνέστηκεν ἐξ ἀρχῆς), and second to discern ‘the components by which it is controlled’ (ὑπὸ τίνων μερέων κεκράτηται).²⁹⁹ In response to these requirements he introduces in chap. 3 and 4 a theory of fire and water, which is the most elaborated elemental speculation attested in the Hippocratic Corpus and one of the most valuable pieces of evidence for such a discussion preceding Aristotle, who firmly establishes the theory of the four elements on the basis of the four primary qualities combined in couples.³⁰⁰ Before discussing the Hippocratic elemental theory and its relation to the concept of balance, let me make a few remarks on the broader context of the discussion.

It is probably not necessary to say that speculations concerning the original constituents of nature in general, and human nature in particular, are amongst the most characteristic features of early Greek natural philosophy and medicine. The four element theory (fire, water, air and earth), which is tradition-

299 *Vict.* 1.2 (Joly-Byl 122.22–24 = L. 6.468), trans. Jones.

300 Aristotle, *GC* 330a30–332a2.

ally ascribed to Empedocles and which was also endorsed by the physician Philistion of Locri,³⁰¹ became the most famous and standard version due to its role in the philosophical speculations of Plato, Aristotle and later authorities including Galen. Before Aristotle, there were many competing theories of this sort, some positing only one or two elements, some speaking about elemental qualities, and in the medical discussions humours such as blood, phlegm or bile were posited particularly frequently. The four humour theory (blood, phlegm, yellow bile and black bile), which represented the Hippocratic heritage for many centuries, is to be found in one single treatise only, while other medical authors entertained humours in other combinations and at varying level of systematic elaboration.³⁰² A number of Hippocratic authors took part in the debate, and no less than two of them even critically reflect the discussion in remarkable detail, that is *On Ancient Medicine* and *On the Nature of Man*. Typically enough, each of them approaches the discussion from a different point of view and each suggests a different solution.

In *On Ancient Medicine* we read a critical reaction to ‘some doctors and sophists’ who say that ‘it is impossible for anyone to know medicine who does not know what the human being is (ὁ τι ἐστὶν ἄνθρωπος)’.³⁰³ Their account, complains the author, ‘tends towards philosophy (ἐς φιλοσοφίην), just like that of Empedocles or others who have written about nature (περὶ φύσιος) from the beginning (ἐξ ἀρχῆς), what the human being is (ὁ τι ἐστὶν ἄνθρωπος) and how it originally came to be and from what it was compounded (ὅπως ἐγένετο πρῶτον καὶ ὁπόθεν συνεπάγη)’.³⁰⁴ He forcefully rejects such speculation and objects that ‘whatever has been said or written about nature by a sophist or doctor pertains less to the art of medicine than to the art of writing (τῇ γραφικῇ)’.³⁰⁵ This seems to be an accurate reflection of a tendency which both *On Regimen* and *On the Nature of Man* represent, though it is not necessary to understand it as a direct attack on either of them. It rather illustrates, as I understand it, (a) the polemical character of the blooming discussion about dietetics, (b) the significance of elemental speculations in accounts of human nature, and (c) the increasingly important role of written accounts in these discussions. Both

301 *Anonym. Lond.* 20.24 (ed. Manetti).

302 Bile and phlegm play an important role in, for instance, *De affectionibus* and *De morbis*, 1, while the author of *De haemorrhoidibus* posits bile, phlegm and blood. The same three humours are combined with the element of water in *De morbis*, 4 or with *pneuma*, as the author of *Anonymus Londinensis* (19.18–48, ed. Manetti) ascribes to Menecrates.

303 *VM* 20 (Jouanna 145.18–146.2 = L. 1.620), trans. Schiefsky.

304 *VM* 20 (Jouanna 146.3–7 = L. 1.620), trans. Schiefsky (modified).

305 *VM* 20 (Jouanna 146.7–9 = L. 1.620), trans. Schiefsky.

Hippocratic authors aim at founding their medical theory on a concept of human nature consisting of elemental constituents and both take for granted that the balance of these constituents defines health and imbalance explains various pathological conditions.

Before introducing the theory of the four humours, the author of *On the Nature of Man* warns his readers in the opening sentence that whoever is accustomed to 'hear speakers discuss the nature of man beyond its relation to medicine will not find the present account of any interest'.³⁰⁶ Then he further specifies the discussion he is not aiming to enter: 'For I do not say at all that man is air, or fire, or water, or earth, or anything else that is not obviously present in man.'³⁰⁷ Given the fact that the Hippocratic author discusses only monistic theories in this chapter,³⁰⁸ it is obvious that he attacks directly neither Empedocles nor Philistion nor the author of *On Regimen* nor anyone else who suggests a theory consisting of more than one principle. As for this part of his criticism, the author disproves the idea that 'man is air, or fire, or water, or earth, or anything else' by pointing out that (a) these are not 'obvious' or 'visible' (φανερόν) constituents of a man,³⁰⁹ (b) the proponents of such theories use evidence and proofs (μαρτύριά τε καὶ τεκμήρια) that amount to nothing,³¹⁰ (c) there is among the proponents a disagreement on the question of which of the elements should be 'the one and the all' (τὸ ἓν τε καὶ τὸ πᾶν).³¹¹

Then he turns to physicians (ἰητροί) and claims that 'some of them say that a man is blood (ὥνθρωπος αἷμά ἐστιν), others that he is bile, a few that he is phlegm'.³¹² Their medical theories can avoid the first objection, for he himself believes that each of the four humours is a visible constituent of the human body (cf. chap. 5), but cannot resist the following line of argument. In response to all monists, he makes a case that 'if man were a unity he would never feel pain... and even if he were to suffer, the cure too would have to be one'.³¹³ Accordingly, no change can be explained by one principle only, as 'generation cannot take place from a unity'.³¹⁴ The only way out, he assumes, consists of a pluralistic theory based on bodily humours, of which he posits four in number:

306 *Nat. Hom.* 1 (Jouanna 164.3–5 = L. 6.32), trans. Jones.

307 *Nat. Hom.* 1 (Jouanna 164.5–7 = L. 6.32), trans. Jones (modified).

308 *Nat. Hom.* 1 (Jouanna 164.10–11 = L. 6.32).

309 *Nat. Hom.* 1 (Jouanna 164.7 = L. 6.32).

310 *Nat. Hom.* 1 (Jouanna 164.13–14 = L. 6.32).

311 *Nat. Hom.* 1 (Jouanna 164.11 = L. 6.32).

312 *Nat. Hom.* 2 (Jouanna 166.12–14 = L. 6.34), trans. Jones.

313 *Nat. Hom.* 2 (Jouanna 168.4–6 = L. 6.34–36), trans. Jones.

314 *Nat. Hom.* 3 (Jouanna 170.8 = L. 6.36), trans. Jones.

‘the body of man (σῶμα τοῦ ἀνθρώπου) has in itself (ἔχει ἐν ἑωυτῷ) blood, phlegm, yellow bile and black bile; such is the nature of his body (ἡ φύσις τοῦ σώματος) and through these he feels pain or enjoys health.’³¹⁵

The form of this announcement deserves some remarks. First, in reflecting on his opponents the author discusses for the most part the question of what man *is* (ὅ τι ἐστί),³¹⁶ in other words what a man consists of or what his primary constituents are, while in his own exposition he transforms the question to that of what the human body *has in itself* (ἔχει ἐν ἑωυτῷ) that is responsible for health and pain. This is certainly not to say that apart from the four humours there are no other constituents of the body, and he most probably does not mean to address the question concerning the material constitution of man in his theory.

Secondly, his opponents are said to discuss the nature of man, while he himself speaks only about the nature of the human body, a limitation which can be significant for the debate concerning the therapeutic rivalry between medicine and philosophical ethics which I discuss in the third chapter.

Thirdly, even though the four humours are the primary structural elements of the human body discussed in the account, when the author defines generation and perishing of living things, he speaks of the four qualities:

Generation will not take place if the combination of hot with cold and of dry with moist be not tempered and equal (ἔξει καὶ ἰσῶς) . . .³¹⁷ Each component must return to its own nature when the body of man dies, moist to moist, dry to dry, hot to hot and cold to cold. Such too is the nature of animals, and of all other things. All things are born in a like way, and all things die in a like way.³¹⁸

The same idea, which can be traced back to Anaximander (DK 2 B 1), is also employed in *On Regimen*.³¹⁹

And fourthly, the four humours are indirectly connected with the four qualities through their relation to the four seasons. Since ‘every year participates in every quality: hot, cold, dry and moist’³²⁰ and every season can be

³¹⁵ *Nat. Hom.* 4 (Jouanna 172.13–15 = L. 6.38–40), trans. Jones (modified).

³¹⁶ *Nat. Hom.* 1 (Jouanna 164.11 = L. 6.32). Cf. *Nat. Hom.* 2 (Jouanna 166.12–14 = L. 6.34).

³¹⁷ This is the principle of balance of the four qualities (discussed already above), which is implemented also in *On Regimen*, developed in Aristotle and inherited by Galen.

³¹⁸ *Nat. Hom.* 3 (Jouanna 170.11–172.12 = L. 6.38), trans. Jones.

³¹⁹ *Vict.* 2.56 (Joly-Byl 178.16–18 = L. 6.566), quoted and discussed below.

³²⁰ *Nat. Hom.* 7 (Jouanna 184.19–20 = L. 6.48), trans. Jones (modified).

characterised by two qualities, for instance spring is said to be wet and hot,³²¹ the affiliation of each humour with one season (blood, for example, is predominant in spring) allows the inference that each humour can be associated with the same two qualities as the corresponding season, e.g. blood is moist and warm. Hence, although humours are not explicitly defined by qualities on this account, qualities play a crucial role in the theory, as Galen also confirms.³²²

The reflections on the polemic discussions attested by the two Hippocratic authors and their objections towards their opponents can be very helpful, I believe, in arriving at a better understanding of the discussions of human nature developed by the author of *On Regimen*. As has already been said, he develops a theory which could be criticized from the perspective of the positions held by the authors of *On the Nature of Man* and *On Ancient Medicine*. Nevertheless, he seems to be well aware of the difficulties recognized in the two Hippocratic texts and a great part of his theory is constructed in a way which aspires to resist at least the most obvious objections. His own theory is introduced as follows:

Now all animals, including man, are put together (συνίσταται) by two elements (ἀπο δυοῖν)³²³, different in power (τὴν δύναμιν) but working together in their use (τὴν χρῆσιν), namely, fire and water. Both together these are sufficient (αὐτάρκεα) for one another and for everything else, but each by itself suffices neither for itself nor for anything else.³²⁴

As mentioned above, the author of *On the Nature of Man* criticizes those who try to define ‘what man is’, while he himself speaks more carefully about humours which ‘are in the body’. The author of *On Regimen* avoids this distinction by

321 *Nat. Hom.* 7 (Jouanna 182.19 = L. 6.48).

322 Galen, *HHH* 13–14 (Mewaldt 9.19–24).

323 Elements are never mentioned in the text and neither is there any other general term for both fire and water. The author says in this sentence only ‘by two’ (ἀπο δυοῖν), which needs to be translated with a noun. Supposing that fire and water are introduced in response to the methodological requirement to define ‘the parts’ (μερέων) of which human nature consists and by which it is controlled (*Vict.* 1.2 = Joly-Byl 122.23–24 = L. 6.468: γνῶναι μὲν ἀπὸ τίνων συνέστηκεν ἐξ ἀρχῆς, διαγνῶναι δέ, ὑπὸ τίνων μερέων κεκράτηται), one should expect the same subject here. Nevertheless, for the sake of clarity, in references to fire and water I shall use the expression ‘elements’.

324 *Vict.* 1.3 (Joly-Byl 126.5–8 = L. 6.472), trans. Jones (modified): Συνίσταται μὲν οὖν τὰ ζῶα τὰ τε ἄλλα πάντα καὶ ὁ ἄνθρωπος ἀπὸ δυοῖν, διαφόροι μὲν τὴν δύναμιν, συμφόροι δὲ τὴν χρῆσιν, πυρὸς καὶ ὕδατος. ταῦτα δὲ συναμφοτέρα αὐτάρκεα ἐστί τοῖσι τε ἄλλοις πᾶσι καὶ ἀλλήλοισιν, ἐκάτερον δὲ χωρὶς οὔτε αὐτὸ ἐωυτῷ οὔτε ἄλλῳ οὐδενί.

employing the verb συνίστημι, which usually translates as ‘put together’, ‘constitute’, ‘compose’, ‘organize’, ‘frame’ or ‘develop’, and often expresses a dynamic process of developing and sustaining organic units,³²⁵ both on the macrocosmic and microcosmic levels. In the present passage it captures the idea that fire and water are the constitutive elements of nature by means of which living organisms are formed.³²⁶ Jones translates it as ‘are composed of’, which, while a viable rendering, invites the impression that fire and water are the only material constituents of animal bodies, which is not necessarily the idea intended by the author of *On Regimen* (nor is it the case for the four humours in *On the Nature of Man*). Moreover, some interpreters even suppose that not only living organisms but *everything* in the world consists of fire and water according to *On Regimen*, as if the concept of fire and water were a complex theory of elements comparable, for instance, to that of Empedocles or Aristotle.³²⁷ Apart from fire and water, the author of *On Regimen* occasionally speaks also about air (ἀήρ, ἡήρ),³²⁸ *pneuma* (πνεῦμα),³²⁹ and earth (γῆ),³³⁰ without holding that these elements are reducible to a mixture of fire and water.³³¹ In order to avoid these ambiguities, I prefer the translation ‘are put together by’.

As for the choice of the elements, fire and water are the paradigmatic examples of opposites,³³² as can be illustrated again by reference to *On the Nature of Man*. After introducing the four humours in reaction to the monistic theories, the author explains that the four humours differ both according to sight, for their colours are different, and according to touch. This is explained as follows:

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- 325 Cf. Aristotle (*Pol.* 1254a34–35, ed. Ross) who claims that an animal ‘in the first place consists of (συνέστηκεν ἐκ) soul and body’. Elsewhere, in order to explain that ‘everything that is formed either by art or by nature exists in virtue of some due proportion (λόγῳ τινὶ ἐστίν)’, Aristotle says that ‘if the hot (τὸ θερμόν) is too powerful (λίαν . . . κρατοῦν) it dries up fluid things; if it is very deficient it fails to make them set (οὐ συνίστησιν)’ (*GA* 767a16–23, ed. Drossaart Lulofs, trans. Peck).
- 326 Not only animals but also plants (*Vict.* 2.56, Joly-Byl 178.17–18 = L. 6.566) and seeds (*Vict.* 1.4, Joly-Byl 126.24 = L. 6.474) ‘are formed’ by fire and water.
- 327 E.g. Miller 1959, 149, Enache 2011, 41, or Demont 2014, 15.
- 328 *Vict.* 1.36 (Joly-Byl 156.29 = L. 6.524), 2.38 (Joly-Byl 160.13 = L. 6.530), 2.38 (Joly-Byl 162.1 = L. 6.534), 4.89 (Joly-Byl 220.24 = L. 6.644 and 224.21 = L. 6.652).
- 329 E.g. *Vict.* 1.9 (Joly-Byl 132.15–18 = L. 6.482), 1.13 (Joly-Byl 136.15–18 = L. 6.488), 1.16 (Joly-Byl 138.6 = L. 6.490), 1.36 (Joly-Byl 156.29–32 = L. 6.524).
- 330 *Vict.* 1.21 (Joly-Byl 140.6 = L. 6.494), 2.37 (Joly-Byl 158.5 = L. 6.528 and 158.11 = L. 6.528), 2.38 (Joly-Byl 160.3 = L. 6.530 and 162.3 = L. 6.534), 4.89 (Joly-Byl 224.4–5 = L. 6.650), 4.90 (Joly-Byl 224.29–31 = L. 6.654 and 226.20–27 = L. 6.656).
- 331 The statue made of water and earth (*Vict.* 1.21, Joly-Byl 140.5–6 = L. 6.494) is the most illustrative example (discussed in chap. 2, p. 157).
- 332 Cf. Aristotle, *MM* 1210a16–23.

For they [i.e. the four humours] are not equally warm, nor cold, nor dry, nor moist. Since then they are so different from one another in form and in power (τὴν ἰδέην τε καὶ τὴν δύνανται), they cannot be one, if fire and water are not one (εἴπερ μὴ πῦρ τε καὶ ὕδωρ ἓν ἐστίν).³³³

The author of *On Regimen*, in contrast, posits these two paradigmatic elemental opposites as the basis of his theory and argues for their unity and opposition at the same time. As I discuss in detail in the following chapter, he is an enthusiastic proponent of the principle of unity in opposition, which is expressed here by the tension between διαφόροι-συμφοροι.

As the author of *On the Nature of Man* defines the difference among the humours in terms of ‘form and power’, in *On Regimen* the visible form of the two elements is omitted (for reasons introduced in chaps. 4–5) and they are differentiated solely by powers (διαφόροι μὲν τὴν δύνανται). The author then focuses on what the opposite elements have in common, which he spells out as χρῆσις, i.e. ‘use’ or ‘functioning’.³³⁴ The whole phrase ‘different in power but working together in their use’ (διαφόροι μὲν τὴν δύνανται, συμφοροι δὲ τὴν χρῆσιν) more or less repeats what is said about the relation between food and exercise in chap. 2.³³⁵ Fire and water can therefore be understood as the elemental representations of the most essential life-sustaining capacities, i.e. nourishment and movement, which the author explicates in the following way:

Now the power that each of them possesses is this: fire can (δύναται) move all things always (πάντα διὰ παντός), while water can nourish all things always’ (πάντα διὰ παντός).³³⁶

Already Alcmaeon is said to speak about the balance of ‘powers’ (δυνάμειν),³³⁷ and both authors of *On Ancient Medicine* and *On the Nature of Man* devote a great part of their discussion to powers. It is therefore not at all surprising that *dunamis* is, as Miller puts it, ‘the key concept of the author for the understanding of man’s *phusis* and for the formulation of his medical theory’.³³⁸

333 *Nat. Hom.* 5 (Jouanna 176.7–9 = L. 6.42), trans. Jones (modified).

334 Cf. Miller 1959, 149.

335 *Vict.* 1.2 (Joly-Byl 124.6–7 = L. 6.468–470).

336 *Vict.* 1.3 (Joly-Byl 126.8–11 = L. 6.472), trans. Jones: τὴν μὲν οὖν δύναμιν αὐτῶν ἔχει ἑκάτερον τοιγόνδε· τὸ μὲν γὰρ πῦρ δύναται πάντα διὰ παντός κινήσαι, τὸ δὲ ὕδωρ πάντα διὰ παντός θρέψαι· ἐν μέρει δὲ ἑκάτερον κρατεῖ καὶ κρατεῖται ἐς τὸ μήχιστον καὶ τὸ ἐλάχιστον ὡς ἀνυστόν.

337 Alcmaeon, DK 24 B 4.

338 Miller 1959, 148.

By introducing the capacities to move and to nourish the author lays stress upon the elements not just as material principles but 'as forces acting within and upon the *phusis*.'³³⁹ Peck speaks about 'a natural extension of the meaning of *dunamis*' which we find in *On Regimen*. While *On Ancient Medicine* 'had taken no account of external influences proper', the main argument of *On Regimen* is that 'all influences upon the body ought to be, and thanks to the author's efforts, can be taken into account and coordinated, and their value estimated, together with foods and drinks alike, by reference to the common standard'.³⁴⁰

The phrase πάντα διὰ παντός deserves a special attention, for it is attested by no other Hippocratic author and it is very rare in the Classical era.³⁴¹ Apart from chap. 4, it appears also in two other passages. First, in the opening sentence of the whole treatise the author claims that there would be no reason for him to write a treatise on human regimen in its relation to health if any of his predecessors 'had throughout (πάντα διὰ παντός) written with correct knowledge everything that the human mind can comprehend about the subject'.³⁴² Second, in chap. 10 we are told that 'the hottest and strongest fire' governs 'all things always' (πάντα διὰ παντός) and is 'never at rest'.³⁴³ Hence in all three cases the phrase expresses the highest level of generality the author wants to stress: the complexity of a dietetic account within the limits of human comprehension, the leading role of the specific form of fire in physiological processes, and the very basic capacities, of fire to provide the formative movement and of water to provide the nourishment, each mutually counterbalancing the other in their mixture.

Immediately after defining fire and water by their complementary capacities the author turns to the second fundamental question he introduced in chap. 2 which concerns the relation of the constituents in terms of mastering and dominance and which lays down the basis for the diagnostic dimension of the dietetic theory. This methodological demand is fulfilled as follows:

339 Miller 1959, 148.

340 Peck 1928, 114–115.

341 E.g. Plato, *Phd.* 94d1, or Aristotle *HA* 617b12.

342 *Vict.* 1.1 (Joly-Byl 122.3–5 = L. 6.466), trans. Jones. Cf. *Vict.* 1.1 (Joly-Byl 122.8 = L. 6.466): no one has yet successfully treated 'the whole subject' (τὸ ὅλον).

343 The role of fire in embryology and physiology will be discussed later, but for now it is helpful to keep in mind that similar concepts of Heraclitus and Anaxagoras are expressed in similar terms when positing γνώμη (DK 22 B 41) or νοῦς (DK 59 B 12) as the leading principles of cosmology. Miller 1959, 149 n. 12 suggests that the several occurrences of the phrase πάντα διὰ παντός is 'a circumlocution surely imitative of the similar expression in Heraclitus', although I believe that the possibility of Anaxagoras' influence should not be excluded either.

But in turn each masters or is mastered (ἐν μέρει δὲ ἑκάτερον κρατεῖ καὶ κρατεῖται)³⁴⁴ up to the greatest maximum or the least minimum possible (ἐς τὸ μῆκιστον καὶ ἐλάχιστον ὡς ἀνυστόν). Neither of them can gain complete mastery (οὐδέτερον γὰρ κρατῆσαι παντελέως δύναται) for the following reason. The fire, as it advances to the limit of the water, lacks nourishment, and so turns to where it is likely to be nourished; the water, as it advances to the limit of the fire, finds its motion fail, and so stops at this point. When it stops its force ceases, and thereafter is consumed to nourish the fire which assails it.³⁴⁵

The phrase ἐς τὸ μῆκιστον καὶ ἐλάχιστον is repeated few lines later, once again in chap. 4, and likewise (with modifications) in chaps. 5 and 8.³⁴⁶ In all these instances it expresses the stretch between the limits within which every life-process oscillates on the scale of more and less.³⁴⁷

The opposite principles cannot exist independently from each other, which closely follows the idea announced already in chap. 2, i.e. that exercises and foods are inseparable components of human regimen. The inseparability of fire and water is further supported by the following argument:

Neither [fire nor water], however, can completely become master for the following reasons. If ever either were to be mastered first, none of the things that are now would be as it is now. But things being as they are, the same things will always exist, and neither singly nor all together will the elements fail. So fire and water, as I have said, suffice (αὐτάρκεα) for all things always (πάνσι διὰ παντός) unto their maximum and the minimum alike (ἐς τὸ μῆκιστον καὶ τὸ ἐλάχιστον ὡσαύτως).³⁴⁸

This type of argument, known as *modus tollens* or ‘denying the consequent’, as a rule consists of two premises: the first one is conditional (if A then B) and the second one is negative (it is not the case that B). From these two premises it can be logically concluded that it is not the case that A. In our passage the consequence of the first premise (‘none of the things that are now would be as

344 Cf. Empedocles, DK 31 B 17.29: ἐν μέρει κρατέουσι περιπλομένοιο χρόνοιο.

345 *Vict.* 1.3 (Joly-Byl 126.10–15 = L. 6.472–474), trans. Jones.

346 *Vict.* 1.3 (Joly-Byl 126.18 = L. 6.474), *Vict.* 1.4 (Joly-Byl 128.5 = L. 6.476), 1.5 (128.13 = L. 6.476), 1.8 (132.2 = L. 6.480).

347 Theoretical grounds for the existence (and even necessity) of this oscillation are laid in *Vict.* 1.4–5.

348 *Vict.* 1.3 (Joly-Byl 126.15–19 = L. 6.474), trans. Jones (modified).

it is now') is denied ('but things being as they are') and accordingly the initial speculation (i.e. that neither of the two elements can completely master each other) is considered to be confirmed. No matter how loose this application of the argument may appear to a modern reader, it follows a pattern common in the law-suits and the scientific literature of the day.³⁴⁹

The stress laid on the sufficiency of the elements 'for all things always' (πᾶσι διὰ παντὸς) seems to reflect a standard demand applied in speculations concerning nature, for nature is commonly understood as an autonomous principle underlying all natural processes. The Hippocratic author of *On Nutrition*, for instance, claims that 'nature is sufficient (ἐξαρκεῖ) in all for all (πάντα πᾶσιν)'.³⁵⁰ The same applies also to *On Regimen*, where nature is represented by the two elements in a relationship which secures the sufficiency of all the phenomena of life. In other words, the elements explaining self-sufficient nature must themselves be defined as self-sufficient.³⁵¹

After providing an argument for the sufficiency of the two constitutive elements, the author introduces the four elemental qualities, which will turn out to be the most important components of the whole theory. In chap. 4 we read:

These [elements] have severally the following [attributes]. Fire has the hot and the dry, water the cold and the moist. Mutually too fire has the moist from water, for in fire there is moisture, and water has the dry from fire, for there is dryness in water also. These things being so, they separate off (ἀποκρίνονται) from themselves many forms of many kinds, both of seeds and of living creatures (καὶ σπερμάτων καὶ ζώων), which are like to one another neither in their appearance (τὴν ὄψιν) nor in their power (τὴν δύναμιν). For as they never stay in the same condition, but are always changing to this or to that, from these elements too are separated off things which are necessarily (ἐξ ἀνάγκης) unlike.³⁵²

Fire and water, which have been introduced as the constituents 'different in power but working together in their use', are first described according to their difference, for each of them can be defined by two opposite qualities,³⁵³ and

349 E.g. Herodotus, *Hist.* 4.118 (ed. Legrand). Cf. Lloyd 1966, 422 n. 1.

350 *Alim.* 15 (Joly 141.24 = L. 9.102).

351 Aristotle (*Metaph.* 1091b16–19) also agrees with those of his predecessors who attributed self-sufficiency to the first principle. Cf. Miller 1959, 149 n. 11.

352 *Vict.* 1.4 (Joly-Byl 126.20–26 = L. 6.474), trans. Jones.

353 The association of each element with two qualities is attested neither for Philistion nor Plato nor any other pre-Aristotelian author, as far as I am aware.

then their common ‘use’ or ‘function’ is secured by the assumption that two opposite qualities, i.e. moist and dry, are shared by both elements. The moist-dry polarity common to both elements is the most crucial aspect of what Peck calls the ‘fundamental doctrine’ of the treatise. ‘That is’, as he writes, ‘the theory of the drawing of moisture by one part of the body from another can easily follow from the theory that the human organism consists of fire and water, that exercise of every kind tends to consume the moisture, and food and drink to replenish it: and so the hot and dry draw the moist. As soon as any part of the body becomes dry through exercise or for any other reason, it immediately draws from the store of moisture in the belly, or if the belly happen to be dry, it draws from the rest of the body.’³⁵⁴ The presence of dryness from fire in water and moisture from water in fire also allows the author to explain the preconditions of a successful embryologic development (chap. 7), to define various mixtures in the body according to their resistance or susceptibility to diseases (chap. 32), and to qualify the condition of the most intelligent soul (chap. 35).

When he claims that fire and water separate off from themselves ‘many forms of many kinds, both of seeds and of living creatures’, he clearly indicates that his theory covers much more than only human nature and that his ambition is to explain life and nature in general. Although he narrows down his focus to human nature in chap. 7, when saying that he ‘shall say nothing about the other animals’ and that he will confine his attention ‘to man’,³⁵⁵ it certainly confirms the assumption that the general principles discussed in the preceding chapters (chap. 3–6) apply not only to man but also to all living beings.

2.5 *The Typology of Human Nature*

The concept of human nature introduced in the first book of *On Regimen* is, as Miller points out, ‘a complex of *dynameis* acting and interacting upon each other without cessation, hence constantly producing and undergoing change and alteration’,³⁵⁶ which holds for every human individual as well as every living being. But from a medical and dietetic point of view, not every change and alteration is compatible with a healthy life for the human body. Though it is true that ‘the mutual and reciprocal changes and processes of the *phusis* must and do maintain a proportional *sunkrēsis* and balance in the normal and healthy functioning of body and soul’,³⁵⁷ unfortunately not every human constitution is in this sense normal nor functions healthily. As a matter of fact,

354 Peck 1928, 123.

355 *Vict.* 1.7 (Joly-Byl 130.18 = L. 6.480).

356 Miller 1959, 153.

357 Miller 1959, 153.

most individual mixtures are not able to maintain the balance spontaneously at all times and in every situation, which opens up the possibility of helping nature by means of moderating regimen wherever natural self-maintaining and self-healing capacities fall short.

Supposing that health depends on various dietetic factors, in order to make a proper diagnosis and, consequently, to apply appropriate dietetic therapy one has to find out how to commensurate all the variables. Otherwise stated, the difficulty of attaining accuracy in estimating the right proportion of food and exercise and other aspects of human diet can be overcome only if some common denominator or the common measure (μέτρον) of individual constitutions, age, foods and exercise, seasons, winds, etc., is available. This measure is found in *On Regimen* in the four fundamentals, as Peck calls the four qualities (hot, cold, dry, moist),³⁵⁸ to which all the variables can be reduced. Such a scheme affords a correlation of each individual human organism with the foods and life activities and all the other conditions affecting it.

The dietetic theory of *On Regimen* as a whole can be illustrated by reference to chap. 32, which not only provides a catalogue of the six basic types of constitutions of the human body, but also makes clear how all the aspects of diet, at least in principle, can be correlated. As C. Enache suggests and illustrates in his detailed analysis of the chapter, 'no other passage in *De victu* can give a better image of the author's idea of health, medicine and dietetics than the typology of human constitutions in 1.32'.³⁵⁹

The first condition described in the chapter is the healthiest of all, consisting of a mixture of the 'rarest fire' and the 'finest water',³⁶⁰ which can be rendered as the most temperate mixture of the lowest degrees of both fire and water.³⁶¹ Those with such a favourable constitution, which is amenable to changes in seasons, ageing and diet, remain healthy until they are forty years of age and some of them even for much longer.

The second constitution is a mixture of the 'strongest' fire and the 'densest' water, the highest degrees of the elements,³⁶² and results in 'strong' and 'robust' bodies. Unlike the first, ideal one, this constitution is rather unstable and susceptible to changes, so those with such constitutions are strongly advised to counteract the seasons with a regimen of opposite qualities. As for

358 Cf. Peck 1928, 62.

359 Enache 2011, 54.

360 Vict. 1.32 (Joly-Byl 148.3–4 = L. 6.506): "Υδατος δὲ τὸ λεπτότατον καὶ πυρὸς τὸ ἀραιότατον σύγκρησιν λαβόντα ἐν ἀνθρώπου σώματι ὑγιεινοτάτην ἔξιν ἀποδεικνύει διὰ τὰδε . . .

361 Cf. Enache 2011, 47.

362 Cf. Enache 2011, 48.

the relationship between fire and water, both the first and the second constitution are well balanced, although they are very different or even opposite to each other in respect to health. As Enache rightly points out, the second constitution seems to be the most vulnerable of all, for while the remaining constitutions are prone to diseases during one season only,³⁶³ individuals with the second constitution have to be on alert 'during both main seasons (i.e. half of the year)'.³⁶⁴ Moreover, according to the same logic one can also deduce that their health problems can be expected to appear in two of the four ages (i.e. in youth as the 'fiery age' and in the 'watery' old age),³⁶⁵ while the other constitutions have only one critical age (apart from the exception, discussed below, of the untypical third mixture).

The remaining four types of body can easily be defined by a combination of the primary qualities as follows: cold and moist (3), moist and warm (4), warm and dry (5), and dry and cold (6). Each of these constitutions is prone to diseases in different seasons and at different ages: cold and moist constitutions are most unhealthy in winter (and spring)³⁶⁶ and in old age; the moist and warm conditions are sick most in spring and least in autumn, 'because in spring there is excess of moisture, but in autumn a moderate amount of dryness',³⁶⁷ and they are most sick in the youngest age; the warm and dry constitutions 'fall sick at the onsets of fire',³⁶⁸ i.e. in summer, and in the prime age (which probably means the young age as the opposite of the old age, when they are 'most healthy'); and the dry and cold constitutions are unhealthy in

363 The third constitution is an exception discussed below (n. 366).

364 Cf. Enache 2011, 48.

365 Enache 2011, 46 speaks about these as the 'strong-profile' ages for they are associated with the qualities typical for fire (hot and dry) and water (wet and cold).

366 There is an inconsistency in this otherwise strictly logical scheme: the Hippocratic author says that 'these bodies are more unhealthy in winter than in summer, and in spring more than in autumn' (*Vict.* 1.32 = Joly-Byl 148.22–23 = L. 6.508). But, as Enache 2011, 48–49 n. 19 objects, 'one would have expected the spring to be healthier than autumn, because it is a fiery season (i.e. it counterbalances the inborn coldness of people having this constitution). Moreover, the author claims that as far as age is concerned, 'such persons are most healthy in childhood, next come youths, while the least healthy are the very old and the elderly'. Again, as Enache reveals, 'one would have expected young people (i.e. the fiery age, which counterbalances the coldness and wetness of the inborn constitution) to be the healthiest, followed by the children (i.e. by the low-profile age pertaining to fire).'

367 *Vict.* 1.32 (Joly-Byl 148.30–31 = L. 6.510), trans. Jones.

368 *Vict.* 1.32 (Joly-Byl 148.35–36 = L. 6.510), trans. Jones.

autumn and in the mature age ('at the age of forty') but healthy in spring and in childhood.³⁶⁹

This account combines the four elemental qualities with the four bodily constitutions, ages and seasons.³⁷⁰ Each of the four categories is defined by two qualities and brings together one type of bodily constitutions with one age and one season in the following way: (4) moist and warm—new-borns—spring; (5) warm and dry—young men—summer; (6) dry and cold—mature men—autumn; (3) cold and moist—old men—winter. The whole scheme runs, as it were, in a circle of qualitative changes, which is identical for the seasons and for the ages of man. Each of the categories is defined by two qualities in the way that the neighbouring categories always share one common quality, while differing in the other (e.g. the fourth constitution is moist, like the third but unlike the fifth, and warm, as the fifth but unlike the third).

When the author advises those with the third type of constitution, for instance, to use a regimen that warms and dries, or those with the fifth type to apply a regimen which cools and moistens, he clearly presupposes that the dietetic variables, which are controllable, such as foods and drinks, exercise, sexual and other activities, baths, oiling, massage, etc., can be classified according to their capacities to cool or heat, dry or moisten those to whom they are applied.

Apart from having a suitable elemental theory that brings together all dietetic variables and a systematic account of foods and exercises, classified according to their capacity to influence the four elemental qualities of the human body (discussed in detail in book 2), the last and most important part of the dietetic account consists of diagnosing individual conditions. This task is addressed in books 3 and 4, which suggest two different but complementary diagnostic approaches. While in book 4 diagnosis is comprised of correct interpretation of dream images based on the micro-macrocosmic analogy, book 3 employs relatively standard diagnostic procedures, as I illustrate next.

The third book opens with an announcement of the discovery of dietetics, which in this version consists of diagnosis ('what is the overpowering element in the body, whether exercises overpower food or food overpowers exercises') and subsequent therapy and prevention ('how to cure each excess, and to insure good health so as to prevent the approach of disease').³⁷¹ First it pro-

369 *Vict.* 1.32 (Joly-Byl 150.5–7 = L. 6.510).

370 The four ages discussed in chap. 33 follow exactly the same scheme as in this chapter, while the description of seasons in chap. 68 is much less schematic and divided into more and shorter periods than the four seasons.

371 *Vict.* 3.67 (Joly-Byl 194.10–14 = L. 6.592), trans. Jones.

vides instructions to the ordinary busy people in chap. 68, and then turns to those who have enough leisure to devote their life to dietetic self-care. The rest of the book is devoted to the application of the discovery to various types of conditions. In some of the cases discussed the diagnosis indicates excess of food or exercises: excess of food in chap. 70–79 and excess of exercises in chaps. 83–85. The remaining chapters seem to follow a different pattern. In chap. 80 bowels (κοιλίαι) are diagnosed as cold and dry;³⁷² chap. 81 diagnoses a hot and moist condition of the belly (κοιλίη), which should be cured by a regimen which cools and dries the belly.³⁷³ The condition in chap. 82 is indicated by, for example, the dry and burnt up stools, dry and bitter mouth, and certain internal functions ceasing to act.³⁷⁴ The reason for such a condition is identified as the intestines having no moisture and therefore swelling and blocking up the passages (διεξόδους), and this condition can be also followed by fevers and vomiting.³⁷⁵ In the end the whole complex of symptoms is diagnosed as an excess of dry heat (ξηρασίη θερμῇ κρατεῖται ὦνθρωπος).³⁷⁶

A typical structure of these chapters starts with symptoms according to which one can diagnose the condition of the body, followed by a pathogenic prognosis of such a condition, if no counteraction is applied, and finally an appropriate treatment is suggested. In chap. 70, to give one example, we read:

The nostrils without obvious cause become blocked after dinner and after sleep, and they seem to be full without there being need to blow the nose. But when these persons have begun to walk in the morning or to take exercise, then they blow the nose and spit.³⁷⁷

Hereafter the author mentions signs such as itching, the condition of the eyes, appetite, complexion, catarrhs or fevers, and concludes:

In such a case food overpowers exercises, and the surfeit gathering together little by little brings on disease. One ought not, however, to let things drift to this point, but to realise, as soon as one has recognised the first of the signs (τὰ πρῶτα τῶν τεκμηρίων), that exercises are overpowered by foods that gather together little by little, whereby

³⁷² *Vict.* 3.80 (Joly-Byl 212.10–11 = L. 6.626).

³⁷³ *Vict.* 3.81 (Joly-Byl 212.27–29 = L. 6.628).

³⁷⁴ *Vict.* 3.82 (Joly-Byl 214.12–14 = L. 6.630).

³⁷⁵ *Vict.* 3.82 (Joly-Byl 214.14–16 = L. 6.630).

³⁷⁶ *Vict.* 3.82 (Joly-Byl 214.16–18 = L. 6.630).

³⁷⁷ *Vict.* 3.70 (Joly-Byl 202.5–7 = L. 6.606), trans. Jones.

comes surfeit . . . Such a case should be treated (χρή ἐκθεραπευθῆναι) as follows.³⁷⁸

The verb ἐκθεραπέω is also used in several other passages,³⁷⁹ but more typically after diagnosing symptoms and indicating a pathological prognosis the author advises the reader to 'use forethought' (χρή προμηθεῖσθαι),³⁸⁰ which evidently reflects the principle of pro-diagnosis, i.e. diagnosis of surfeit before diseases attack. The aim of the suggested therapy is always to counterbalance the surfeit (of food, exercises, or of the elemental qualities of some inner structures). In our example food overpowers exercise and it is therefore necessary to increase exercises and lessen the intake of food. The author advises practising the usual exercises (ἐκπονήσαι ἐν τοῖσι γυμνασίοις τοῖσιν εἰθισμένοισιν) without fatigue (ἀκόπως), having hot bath, vomiting immediately after eating, flushing the mouth with astringent wine after vomiting, then having a short walk in the sun, etc. On the third day the author recommends resuming all the usual exercises and walks and gradually increasing the intake of food 'until the usual food is restored on the fifth day after vomiting'. If the patient's condition improves after this procedure, the subsequent regimen should consist of taking 'less food and more exercise'. But if the signs of the surfeit of food do not disappear, another course of vomiting is recommended after two days pause, followed by the same progressive increase of food again. 'Even if a third course of vomiting be necessary, one should continue until he is rid of the surfeit.'³⁸¹

Chaps. 73 and 76 are of special interest since each of them offers two different ways how to treat the same pathological condition, one is faster and the other slower but safer. The first method is rather more drastic, starting with hellebore purges and continuing with ten days of progressive diet slowly increasing light and soft food, light exercises, baths and abstaining from sex. The second method avoids drug-taking and applies only a moderation of regimen, but lasts four weeks or even longer.³⁸²

378 *Vict.* 3.70 (Joly-Byl 202.12–18 = L. 6.606–608), trans. Jones (modified).

379 *Vict.* 3.71 (Joly-Byl 204.9–10 = L. 6.610), 3.83 (216.7 = L. 6.634). Cf. *Vict.* 4.89 (224.19 = L. 6.652).

380 *Vict.* 3.72 (Joly-Byl 204.16 = L. 6.612), 3.73 (204.33 = L. 6.614), 3.74 (206.23 = L. 6.616), 3.76 (208.16 = L. 6.618), 3.79 (210.28–29 = L. 6.624), 3.81 (212.27 = L. 6.628), 3.82 (214.17 = L. 6.630). Cf. *Vict.* 4.89 (224.25 = L. 6.652).

381 *Vict.* 3.70 (Joly-Byl 202.18–33 = L. 6.608), trans. Jones (modified).

382 *Vict.* 3.73 (Joly-Byl 204.27–206.13 = L. 6.612–614), 3.76 (Joly-Byl 208.11–27 = L. 6.618–620). Cf. *Vict.* 4.89 (Joly-Byl 222.20–22 = L. 6.648), where two alternative cures are also suggested.

As for the connection to the rest of the treatise of the diagnostic and therapeutic instructions provided in book 3, it should not be overlooked that they do not necessarily presuppose the theory of fire and water, the typology of bodily constitutions discussed in chap. 32, or many other issues brought up in the first book. Moreover, these instructions do not require any detailed knowledge of the food properties and the effects of the various exercises and other activities discussed in book 2, nor, as already mentioned, do they presuppose the application of the dream diagnosis introduced in book 4. In this sense the third book stands as an independently useful manual, which can be also said about the instructions given in chap. 68 on their own. The relative independence of these accounts does not cast doubt on the unity of the whole treatise, for they are all compatible and in a way complementary to each other, as I shall try to illustrate next.

The account of regimen in chap. 68 provides only the most concise general guidelines on how to counterbalance seasonal changes in terms of the four elemental qualities, which are very similar in range, general principles applied and topics to those introduced in *On Regimen in Health*. The rest of book 3 allows a diagnosis of individual conditions in terms of the balance between activity and nourishment, which is an important dietetic principle not mentioned in *On Regimen in Health*. Another diagnostic approach is suggested in book 4, where, instead of the imbalance between food and exercise, individual conditions are diagnosed in terms of the four qualities in combination with recognizing the affected parts or structures in the body (such as bowels, the 'hollow parts' of the body, flesh, head, seed, bladder or 'circuits').

The first book supplies the elemental theory bringing together the opposition of activity and nourishment with the four qualities, and thus all the diagnostic and therapeutic approaches presented in the other books are in principle commensurable. The account in chap. 32 enlarges the dietetic perspective by referring to different types of bodily constitutions reacting in different way to changes brought by seasons and ageing.

This is, in a nutshell, the dietetic theory in practice which has been offered by the author of *On Regimen* in response to his predecessors. When we read his dietetic theory against the other Hippocratic treatises on dietetics, it seems that he not only collects the particular dietetic topics and specific practical instructions introduced by his predecessors, but he also aims at integrating them into an overall theoretical framework which would surpass previous accounts and set a new standard in the field of dietetics.

When we compare *On Regimen* with *On Ancient Medicine*, *On the Nature of Man* and *On Regimen in Health*, all the authors are in accordance in pro-

moting dietetic therapy and prevention and defining health as a balanced mixture (*krēsis*) of opposite constituents, although they disagree on what the primary constituents of man are. But despite the differences of their particular suggestions, their theories are not as distinct as it may appear. In *On Ancient Medicine* the bodily mixture responsible for health consists of innumerable qualities and humours (humours are on several occasions associated with the hot or the cold) and their mutual interrelationships are identified as the causes of diseases. The author of *On the Nature of Man* and *On Regimen in Health* reduces the innumerable differences of the elementary constituents into four humours and four qualities, the same four qualities which appeared already in Alcmaeon's definition of health (DK 24 B 4) and which were 'most prominent of all in early Greek speculative thought' in general.³⁸³ The author of *On Regimen* suppresses the significance of humours and replaces them with the two elements, which are nevertheless defined by the standard four elemental qualities.³⁸⁴

Peck tries to reconcile the tension between practically no use of humours in *On Regimen* and their primary role in *On Ancient Medicine* and other treatises, such as *On the Nature of Man* or *On the Sacred Disease*, by the following line of argument. In *On Ancient Medicine* diseases are 'caused by the abscession of some humour', and 'all humours are *ex hypothesi* a kind of moisture'.³⁸⁵ *On Regimen* reduces most of diseases or unfavourable conditions to a kind of excess in the tension between the nutritive moisture of the body and the heat of life. Hence the different kinds of moisture as they manifest in bodily humours are of little importance in *On Regimen*, where moisture in general is the appropriate level of abstraction. Various qualities of moisture can be still diagnosed in the individual body, although 'abscession is no longer abscession of a particular kind of humour'.³⁸⁶

Apart from the common concepts of health and mixture, and the reconcilable concepts of humours and moisture, there are some further convergences in the two treatises. M. Schiefsky points, for instance, to the concern to set individual contribution against the background of a long tradition of past discoveries (*Vict.* 1.1; *VM* 2), the recommendation to use analogies to study human nature (*Vict.* 1.11; *VM* 22), reflection on the limited *akribeia* attainable in medicine

383 Lloyd 1964, 92. E.g. Heraclitus, DK 22 B 126, Anaxagoras, DK 59 B 4, Diogenes of Apollonia, DK 64 B 5, and Philistion in the *Anon. Lond.* (20.25, ed. Manetti).

384 E.g. phlegm and bile, which seem to be reducible to the qualities of moist (*Vict.* 4.89, Joly-Byl 220.26 = L. 6.646) and hot (*Vict.* 4.89, Joly-Byl 222.16 = L. 6.648).

385 Peck 1928, 122.

386 Peck 1928, 122.

(*Vict.* 1.2; *VM* 9), and excessive use of the concept of *dunamis* to relate the various components of human regimen to the human constitution or *phusis*.³⁸⁷

As far as the various dietetic variables are concerned, one can observe the following tenet in the Hippocratic treatises: the simpler and more schematic the elemental theory is, the more aspects of regimen can be (and are) integrated in such a theory. *On Ancient Medicine* operates almost exclusively with individual constitutions and the properties of foods, *On the Nature of Man* and *On Regimen in Health* also integrate seasonal changes and ages and introduce a typology of bodily constitution. The two types of ages in *On Regimen in Health* grow to four in *On Regimen*, and the two types of constitution, moist and dry,³⁸⁸ are expanded into six representative kinds of bodily mixtures.³⁸⁹ *On Regimen* further enhances the theory by applying the principle of equilibrium to the polarity between food and exercise (i.e. nutrition and motion),³⁹⁰ which is otherwise not attested in the context of dietetic prevention before Plato.³⁹¹ And

387 On all these points, however, there are substantial differences of detail between the two texts. For example, while *phusis* and *dunamis* are closely connected in *On Ancient Medicine* (cf. Schiefsky 2005, 226–228), *On Regimen* has also a notion of a *dunamis* that is not natural but artificial or acquired (*Vict.* 1.2, Joly-Byl 124.2–4 = L. 6.468). Hence, on this issue *On Regimen* occupies, as Schiefsky 2005, 228 puts it, a middle position between *On Ancient Medicine* and *On the Nature of Man* on the one hand and the theorists attacked in *On the Nature of Man* on the other.

388 Compare the distinction between phlegmatics and choleric as the two main types of constitutions of human body in *Morb. Sarc.* 2 (Jouanna 10.18–11.2 = L. 6.364–366), 5 (12.21–22 = 6.368), or 15 (28.9–10 = 6.390), and *Aër.* 4 (Diller 30.6 = L. 2.20), 10 (Diller 48.20–23 = L. 2.46), and 24 (Diller 78.21–22 = L. 2.88). On a single occasion the author of *On Regimen* also uses this typology when claiming that honey mixed with water ‘sends to stool those of bilious temperament, but binds those who are phlegmatic’ (*Vict.* 2.53, Joly-Byl 174.10–11 = L. 6.556, trans. Jones).

389 Moreover, the sophistic combination of the elements allows the author of *On Regimen* to introduce the difference between balanced and stable constitution from the one which is also balanced but unstable.

390 Cf. Jouanna 2012, 151: ‘The author of *Regimen* follows the same principle as that of the *On the Nature of Man*, i.e. that diet should be opposed to the qualities of the season. However, whilst *On the Nature of Man* restricts itself to alimentary diet, *Regimen* also adds recommendations about exercise.’ A detailed discussion of the resemblances between the two texts is to be found in Joly-Byl 2003, 41–44, and Jouanna 2002, 52–54 and 335.

391 Cf. Plato, *Tim.* 90c6–7 (ed. Burnet), where, within a discussion of a balanced regimen, Timaeus advises in particular the provision of proper ‘nourishment and motions (τροφᾶς καὶ κινήσεις)’. This theory, as I argue in chap. 4 (p.238–241), was probably adopted directly from *On Regimen*. As for the possible precursors of the concept of health as a balance between food (or nutrition) and exercise (or movement), Herodicus of Cnidus suggested that diseases may originate from residues of nutriment whenever men who takes

last but not least, *On Regimen* enriches the field of dietetics with the diagnosis from dreams, discussed in the fourth book, which provides ‘the earliest dream-book that has come down to us from antiquity’.³⁹²

Thereby the author of *On Regimen* accomplishes the project of dietetics as it was sketched by his predecessors. ‘Some indeed have succeeded in one respect and others in another’, but none of them, as the author clearly announces in the opening chapter of the treatise, ‘has successfully treated the whole subject’. As far as our evidence goes, it is difficult indeed to find any crucial aspect of dietetics discussed by his predecessors and contemporaries which has not been integrated in his theory, and ‘there was little change in manner or substance of writing about diet after *Regimen* was written’.³⁹³

2.6 *Elemental Explications*

In my evaluation of the author’s ‘discovery’ I have, so far, paid minimal attention to the role of fire and water, which is a rather problematic part of his theory,

nourishment ‘stay motionless (ἀκίνη<τῇ>σαντες)’ (*Anon. Lond.* 5.6–8, ed. Manetti), and the author of *On Breaths* defined bad regimen (πονηρὴ διαίτα) as ‘giving of more food, moist or dry, to the body than the body can bear, without counteracting the bulky food by exercise (πόνον μηδὲνα τῷ πλῆθει τῶν τροφῶν ἀντιτιθῆναι)’ (*Flat.* 7, Jouanna 111.2–5 = L. 6.98, trans. Jones; cf. *Prorrh.* 2.1 = L. 9.6–8). In *Internal Affections*, under specific pathological conditions the exertion of the patient is recommended to be increased together with a gradual increase of food (*Int.* 21 = L. 7.220.6–8: ταῦτα δὲ ὡς πλεῖστα τραγέτω καὶ ὡμὰ καὶ ὀπτὰ καὶ ἐφθὰ, αἰεὶ πλείω ἐκάστης ἡμέρης, καὶ ταλαιπωρεῖτω πρὸς τὰ σιτία τεκμαιρόμενος καὶ ἐξ ὀλίγου πλέον). Cf. *Int.* 43 (= L. 7.274) and 44 (= L. 6.276). All these authors, nevertheless, mention the relation between nutrition and exercise as one of the pathological factors, whilst in *On Regimen* it is elaborated into the chief diagnostic principle and one of the main articles of dietetic prevention. Accordingly, in contrast to Joly-Byl 2003, 233, I take this principle as an important part of the ‘discovery’ announced by the author of *On Regimen*. The closest Hippocratic parallel to this theory is to be found in the sixth book of *Epidemics* where we read about ‘moderation in exercise, food, drink, sleep and sexual activity’ (*Epid.* 6.6.2, Manetti-Roselli 124.2–3 = L. 5.324: πόνοι, σιτία, ποτά, ὕπνος, ἀφροδίσια, μέτρια). This and a number of other parallels between the two texts can be explained by the direct influence of *On Regimen* on the author of *Epidemics* (cf. Joly-Byl 2003, 38–41).

392 Hulskamp 2008, 160. Cf. van Lieshout 1980, 100, Oberhelman 1987, 49. The diagnostic value of dreams was approved by later authorities, such as Aristotle (*Div. Somn.* 463a3–7), Rufus of Ephesus (*Quaest. Med.* 28–33 = Gärtner 34–37) or Galen (*Hipp. Epid.* 6.8 = Pfaff 458.28–459.10, *Hipp. Prorrh.* 1.1.5 = K. 16.524–527, *Dig. Insomn.* = K. 6.832–835).

393 Smith 1980, 440. Cf. Smith 1992, 269: ‘Dietetic discussion remained through the Hellenistic period a stable, formulatic catalogue form. It expanded to encompass new material and new styles of life, but was conservative in terminology and modes of expression. *Regimen*, the classical representative in the subject, remained part of the group.’

at least from the point of view of the history of dietetics. First, it should be noted that even though many topics presented in *On Regimen* (or even most of them) became standard items in later dietetic accounts, this is not the case for the fire-water theory. As far as our evidence goes, no ancient author writing on dietetics after *On Regimen* adopted the same elemental principles, and the author of *On Regimen* has been repeatedly criticized for his elemental theory from various points of view. Galen, who applies criteria concerning the authorship in his assessment, complains that while the second book of *On Regimen*, and namely the part where foods are treated ‘might perhaps with good reason be thought worthy of Hippocrates’, in the first part, which evidently refers to the first book and especially its elemental theory, the author ‘very often strays from Hippocrates’ thought (τῆς Ἱπποκράτους γνώμης).³⁹⁴ Jones applies criteria concerning the ‘scientific’ value of the elemental theory and maintains that ‘the weakness of the writers’ thesis is plain to all’. This is explained as follows:

He takes an unproved postulate and builds upon it a detailed theory of health and disease—the very fault attacked by the author of Ancient Medicine. This defect tends to vitiate the very sensible observations in the second and third books dealing with foods, drinks, exercise and regimen generally. Had the writer confined himself to these, and worked out his scheme without any bias due to the supposed effects of fire and water, he would have achieved a more useful result without in the least weakening his boasted εὖρημα.³⁹⁵

Even though Jones’ criteria are considerably different from the standards applied to ancient science nowadays, i.e. some eighty years after Jones’ edition,³⁹⁶ we are still faced with the question concerning the usefulness of the elemental theory, which remains without a satisfactory answer.

Second, the author of *On Regimen* does not himself explicitly mention the elementary principles outside the theoretical account of human nature in the first book, with the exception of two passages, both in chap. 56, which deserve closer inspection. As for the first one, after having discussed the nature of various districts and winds and foods and drinks, the author proceeds to give instructions on how the natural faculties of foods can be changed:

394 Galen, *Alim. Fac.* 1.1 (Helmreich 213.6–8).

395 Jones 1931, xlii.

396 For recent approaches to the historiography of ancient medicine see van der Eijk 201b.

The powers of foods severally ought to be diminished or increased in the following way, *as it is known that out of fire and water are composed all things, both animal and vegetable, and that through them all things grow, and into them they are dissolved.* Take away their power from strong foods by boiling and cooling many times; remove moisture from moist things by grilling and roasting them; soak and moisten dry things, soak and boil salt things, bitter and sharp things mix with sweet, and astringent things mix with oily.³⁹⁷

The remark which I have highlighted in italics clearly refers back to the first book, where the elemental theory of human nature is discussed, and as such it may serve as a reminder of the broader context of the dietetic theory. It certainly supports the unity of the four books (or specifically, in this case, the relation between books 1 and 2),³⁹⁸ and moreover it clearly indicates that the same elemental principles are operative not only in all animals but also in plants (in this sense it increases the level of generality of the elemental theory). Nevertheless, it still does not explain why such a reminder appears in this and no other chapter of the book. As far as the practical aspects of the dietetic treatment are concerned, we can easily erase the sentence from the text without losing anything substantial. The fact that the cooling, warming, drying, moistening and other potencies of various food-stuffs can be changed by means of boiling, baking, roasting and mixing together is supported by perfectly empirical culinary experience and does not depend on the theory of fire and water. Peck proposes that the author reverts here to the statement that all living things consist of fire and water 'because he feels that some kind of counterblast is necessary to a particularly strong outburst of the humour-dynamis theory' in *On Ancient Medicine*.³⁹⁹ In any case, this remark does not provide anything indispensable to the passage on its own and seems, rather, to be a later insertion into the text (probably made by the author himself when revising the four books into a coherent whole).

The second passage seems to be a similar case. It says that 'raw things cause colic and belching because what ought to be digested by the fire is dealt with by the belly, which is too weak for the substances that enter it'.⁴⁰⁰ The aim of this passage, as I understand it, is to explain why raw food is not appropriate for human nature and why it is necessary to treat food with fire in terms

397 *Vict.* 2.56 (Joly-Byl 178.16–22 = L. 6.566), trans. Jones (italics are mine).

398 Joly-Byl 2003, 277.

399 Peck 1928, 115.

400 *Vict.* 2.56 (Joly-Byl 180.23–25 = L. 6.570), trans. Jones. Cf. *Vict.* 1.20 (Joly-Byl 140.1–2 = L. 6.494).

of cooking, which is a topic discussed at length in *On Ancient Medicine*. The explanation rests on the assumption that the process of digestion depends on the heat of fire, which is limited in its power and accordingly cannot digest everything. But again, one may ask why it is better to speak about the element of fire where the concept of digestive heat seems to be sufficient enough. The concept of digestion as a heating process is common in other Hippocratic treatises and underlies the meaning of πέψις, which semantically covers various natural processes involving heating, such as cooking, ripening, digestion of food and concoction within organic structures.⁴⁰¹

In the same chapter, in between the two exceptional passages, there is an account which clearly shows how easily the author gets along without the concept of fire. In order to describe what happens to the body when foods and drinks with a drying capacity are applied, he declares:

The body growing warm is emptied of its moisture, partly by the foods themselves, while part is consumed in giving nourishment to the warmth of the soul (ψυχῆς θερμόν), while another part, growing warm and thin, forces its way through the skin.⁴⁰²

It is noteworthy that while in book 1 soul is repeatedly defined as a mixture of fire and water, as I discuss in detail in the third chapter, and digestive and embryologic processes are explained by the same elements, in this passage it is ‘the warmth of soul’ that plays the same role as fire. Similar instances can be found in chap. 60, where the moisture and warmth between body and soul in sleep are discussed,⁴⁰³ or in chap. 38, where we read that moist winds temper the heat of the soul (ψυχῆς θερμόν).⁴⁰⁴ All other occurrences of fire in books 2–4 refer solely to fire external to human bodies, i.e. the fire used in food preparation,⁴⁰⁵ or fires in general, which have the same drying effect as sun due to the fact that they ‘draw the moisture from the body’.⁴⁰⁶

401 Cf. LSJ, s.v. πέψις.

402 *Vict.* 2.56 (Joly-Byl 180.11–14 = L. 6.568), trans. Jones.

403 *Vict.* 2.60 (Joly-Byl 182.29 = L. 6.574).

404 *Vict.* 2.38 (Joly-Byl 162.1 = L. 6.534).

405 *Vict.* 2.40 (Joly-Byl 162.22 = L. 6.536), 2.42 (Joly-Byl 164.27–28 = L. 6.540, and 166.3 = L. 6.540), 2.44 (Joly-Byl 166.15 = L. 6.542), 2.56 (Joly-Byl 178.24 = L. 6.566). In the same vein, outside book 1 the author prefers to speak about moisture rather than water when he refers to the nutrition of the innate heat. Water as a drink is said to have the same cold and moist qualities as the element of water (*Vict.* 1.4, Joly-Byl 126.21–22 = L. 6.474; *Vict.* 2.52, Joly-Byl 172.17 = L. 6.554), yet the same pair of qualities can be also ascribed to various foodstuffs, drinks, exercises and also winds (see *Vict.* 2.38 = Joly-Byl 160.2–3 = L. 6.530).

406 *Vict.* 2.58 (Joly-Byl 182.4 = L. 6.570).

After having reviewed the exceptional passages in chap. 56, I turn back to the initial questions concerning the function of the elemental theory. Supposing that throughout his theory the author assumes as fundamentals the qualities of hot, cold, wet and dry, Peck asks why he did not frankly say that all animals and men among them consist of four things, i.e. the moist, the dry, the cold and the hot.⁴⁰⁷ This is certainly not a trivial question and it is not at all obvious why the author introduces the two-element model and how, in the end, it serves the practical purposes of dietetics.

So far we have seen that outside book 1 the author does not operate with his elemental theory and that even in the two exceptional passages the elements of fire and water are not indispensable for the matters discussed there. If we focus now once again on the first book, only two dietetic variables mentioned in the methodological introduction in chap. 2 happen to be explained with the help of the two elements: the typology of the original constitutions (chaps. 32 and 35) and the differences in ages (chap. 33).

As far as the fire-water theory is concerned, it is actually of little use in the practical discerning of individual human constitutions, as I will illustrate next. For instance the fourth constitution in chap. 32, which is defined as a mixture of the moistest fire and the densest water, is discerned as moist and warm nature (ὕγρην καὶ θερμὴν φύσιν).⁴⁰⁸ But this qualification is not based on haptically acquired observation (as one would expect in Galen)⁴⁰⁹ but rather on the signs which are introduced in the subsequent text (τοῖσδε γινώσκειν), especially the facts that 'such constitutions are sick most in spring and least in autumn', that they are 'most unhealthy in the youngest age', and that 'their bodies grow quickly' and 'are subject to catarrhs'.⁴¹⁰ The dietetic prescriptions recommended to such constitution are derived from the qualities of moist and warm specific to their bodies, 'their regimen should consist of such things as dry and cool, both food, drink and exercise'.⁴¹¹ Accordingly, for therapeutic purposes nothing more is necessary than to recognize the particular constitution according to its vulnerability in spring rather than in autumn and the

407 Peck 1928, 115.

408 *Vict.* 1.32 (Joly-Byl 148.28–29 = L. 6.510).

409 Galen is also often highly theoretical and abstract, but on this specific point he holds that 'by perception we shall judge temperateness and intemperateness' (*San. Tu.* 1.5 = Koch 12.18–19, trans. Green), gives a concrete example of a diagnosis by laying his hand on the chest of his patient in order to investigate 'what was the quality of his heat' (*San. Tu.* 5.11 = Koch 161.25–27, trans. Green), and provides instructions on how to train this capacity (*Temp.* 2.2 = Helmreich 54.8–56.11).

410 *Vict.* 1.32 (Joly-Byl 148.28–32 = L. 6.510).

411 *Vict.* 1.32 (Joly-Byl 148.32–34 = L. 6.510), trans. Jones.

inclination to catarrhs, and the fact that for them the drying and cooling diet is helpful.

The third constitution, to give another example, which is a mixture of ‘the thickest water and the finest fire’, must be discerned (ἐξ ὧν διαγινώσκειν χρή) as cold and moist nature (ψυχρὴν φύσιν καὶ ὑγρὴν).⁴¹² After the pattern applied in the fourth constitution, the phrase ἐξ ὧν refers to the signs that follow, namely that such bodies ‘are more unhealthy in winter than in summer, and in spring more than in autumn’.⁴¹³ As for age, they are ‘most healthy in childhood, next come youth, while the least healthy are the very old and the elderly’.⁴¹⁴ Again, following the standard allopathic pattern, such persons ‘ought to use a regimen that warms and dries’, and the assumption that such a constitution consists of ‘the thickest water and the finest fire’ is of no practical value. And the same pattern is applied also to the fifth and sixth constitution, and the concluding remark closing the chapter seems to confirm that diagnostic procedure: ‘In this way then ought one to judge of the nature of the original constitution of man.’⁴¹⁵

To sum up, it is certainly helpful for therapeutic purposes to recognize each individual constitution in order to apply a fitting regimen. But why is it necessary to define these constitutions in terms of the two elements, for instance, the ‘moist and warm nature’ by a mixture of the moistest fire and the densest water? As an explanation, Peck suggests that the author was ‘still influenced by the old doctrine of κοινωνία (association)’, which ‘was of course a regular Pythagorean conception, as is shown by references in Plato’.⁴¹⁶ The links with Pythagorean tradition in *On Regimen* are undeniable, as will be illustrated in chapters two and three, but the principle of association cannot be regarded as an exclusively Pythagorean concept.⁴¹⁷ Even though I agree with Peck that the author of *On Regimen* ‘can bring out the *association* better’ than his fore-runners ‘by representing the four elementals as occurring only in the combinations of Fire and Water, and then further by representing Fire and Water

412 *Vict.* 1.32 (Joly-Byl 148.20–22 = L. 6.508), trans. Jones.

413 *Vict.* 1.32 (Joly-Byl 148.22–23 = L. 6.508), trans. Jones.

414 *Vict.* 1.32 (Joly-Byl 148.23–25 = L. 6.508), trans. Jones.

415 *Vict.* 1.32 (Joly-Byl 150.9–10 = L. 6.510), trans. Jones.

416 Peck 1928, 115. Peck refers here to Democritus, *On Ancient Medicine*, and Plato (*Grg.* 507e, *Sph.* 248a–b). One is also advised to compare ‘the whole doctrine of *participation* in Plato’.

417 The author of *On Regimen* does not speak about κοινωνία but rather says that the two elements συμφόροισιν δὲ τὴν χρῆσιν (*Vict.* 1.3, Joly-Byl 126.6 = L. 6.472). Moreover, the same idea, at least in principle, underlies the concept of mixture (κρήσις) discussed in other Hippocratic treatises, which bear no traces of Pythagorean thought.

as occurring only in combination',⁴¹⁸ it is not the only possible motivation for positing the elemental theory.

Some passages suggest that the elementary principles can serve an explicative role, which is, as I propose, their main function.⁴¹⁹ The first constitution in chap. 32 provides a good example of this function, for the diagnosis of a perfectly healthy constitution does not have any therapeutic consequences. But one can ask why it is that someone can live for most of his life in a state of health without concerning himself with this state. The mere assumption that a healthy state depends on the balance of opposite qualities, which is under constant influence by external as well as internal factors (seasons, food, life activities, ageing, etc.), cannot explain the difference between those constitutions which cope with these fluctuations easily and spontaneously and those which are prone to falling out of balance with every change of weather or regimen. In order to answer this question, the author proposes that the healthiest people have a mixture of 'the finest water and the rarest fire', which allows him the following line of argument: 'At the greatest changes in the seasons of the year neither is fulfilled to the extreme limit; the water is not fulfilled to the densest limit at the onsets of the fire, whether these be due to alterations in age or to the foods and drinks that comprise diet. For both <the finest water and the rarest fire> can admit the amplest generation and fullness.'⁴²⁰ This explanation is further illustrated with reference to bronze making: 'It is the softest and rarest bronze that admits of the most thorough blending and becomes most beautiful; even so is it with the finest water and the rarest fire, when they are blended together.'⁴²¹ The process of bronze making will serve as an illustration of the basics of human physiology in chap. 13.

The explicative role of the elements can be also seen in chap. 33, where each of the four ages is defined by a pair of qualities. In order to explain why a young man is warm and dry, while a child is moist and warm, the author proposes

418 Peck 1928, 116.

419 Fredrich 1899, 167–192 detects a very strong search for causes also in book 2 in the chapters discussing the foodstuffs (chaps. 40–56), where fire and water play no role (with the exception of chap. 56 already discussed). Cf. van der Eijk 2005, 91–92, who suggests that 'Diocles' warning against too automatic an application of causal explanation, as well as his prescription (fr. 176.36, ed. van der Eijk) that causal explanation must make the physician's account more informative (γνωριμώτερον), may well be understood as applying to the occasionally just truistic explanations found in *On Regimen*.' In my analysis I leave aside these passages and focus only on explications by means of the two elements as attested in book 1.

420 *Vict.* 1.32 (Joly-Byl 148.3–9 = L. 6.506), trans. Jones.

421 *Vict.* 1.32 (Joly-Byl 148.9–11 = L. 6.506–508), trans. Jones.

that the young man is warm 'because the onset of the fire masters the water' and dry 'because the moisture from the child is already spent, partly for the growth of the body, partly for the motion of the fire, and partly through exercise.' In a similar vein, the constitution of an old man is said to be cold and moist 'because fire retreats and there is an onset of water'.⁴²²

To conclude, the specific theory combining the two elements with the four qualities introduced in chap. 3 and 4 is the core of the author's 'biological theory', as Joly calls it,⁴²³ on the basis of which a broad range of natural phenomena can be explained, such as ageing, differences in individual constitutions or the physiological processes related to reproduction and embryology, which occupy a great part of the first book. Neither of these explanations has any important role in the dietetic therapy itself.⁴²⁴ It should also be noted that all these topics are, directly or indirectly, related to the concept of soul, which is elaborated in the treatise to a remarkable degree and which bears no comparison with any other Hippocratic text. The questions concerning the body-soul relationship are the main topic of my third chapter, where I shall discuss these issues in more detail, including the typology concerning the 'intelligence of the soul' in chaps. 35 and 36. But for the purposes of the present discussion it is necessary to recognize that the notion of soul depends on the theory of fire and water.

These are the topics in which the influence of the tradition of early Greek philosophical and cosmological speculations is most evident and in which the original suggestions in *On Regimen* find their proper place. The elemental theory may seem obsolete from the dietetic and medical point of view, as represented by the Hippocratic *On Ancient Medicine*, Galen or Jones, but

422 *Vict.* 1.33 (Joly-Byl 150.11–22 = L. 6.510–512), trans. Jones. . Cf. *Aph.* 1.14 (L. 4.466): '... those who are still growing (τὰ αὐξανόμενα) have most innate heat (ἔμφυτον θερμόν) and need most food, while old men have little innate heat and need only little fuel (ὕπεκκαυμάτων).'

423 Joly 1960, 20–21.

424 A possible exception is a passage in chap. 27 (*Vict.* Joly-Byl 142.27–144.14 = L. 6.500), which distinguishes between males, who incline to fire and grow from regimen that are dry and warm, and females, who incline to water and grow from foods, drinks and regimen that are cold, moist and gentle. This information has nothing to do with keeping our bodies in health and the gender difference does not play any role in the dietetic prescriptions discussed in book 3. In other words there is no difference between the diet of males and females in *On Regimen* apart from this passage, which can be of help to those who are planning to conceive a child and aim to influence its gender. Supposing that females have a rather more watery nature and males a more fiery nature, those who want a girl are advised to use a regimen inclining towards water and those who want a boy should adhere to regimen inclining towards fire.

regarding the tradition of philosophical inquiries into nature, it is an appropriate device for explaining natural processes. Both Plato and Aristotle recognize the value of causal explanations in distinguishing purely empirical experience from a theoretical account, and both employ medical examples to illustrate this distinction.⁴²⁵

Conclusion

I opened my discussion with Plato's reflections on the new approach to health introduced by the 'sophisticated Asclepiad doctors,' who recognized the diagnostic as well as the therapeutic values of dietetics, created new terminology and encouraged people to stand on guard of their health. Plato suggests that there was no such an approach before the time of Herodicus of Selymbria, who serves as a negative example in his attack on extensive care of the body. In searching for the roots of the new approach, I have followed previous suggestions concerning the roots of dietetics and focussed first on the earliest Pythagorean evidence and then on the tradition of athletic training. As for the Pythagoreans, I have argued that we have practically no reliable evidence for the view that early Pythagoreans were interested in the dietetic care of health, and the only seemingly trustworthy testimony connecting Pythagoreans with medical dietetics is the report of Iamblichus.⁴²⁶ However, considering the striking resemblances between Iamblichus' report and the specific account of dietetics presented in the Hippocratic *On Regimen*, which is the only extant ancient dietetic account bearing some traces of Pythagorean thought, it seems to be probable that Iamblichus draws (most likely via an intermediate source or sources) on the theory of *On Regimen* rather than reporting on some earlier but otherwise unknown Pythagorean accounts.⁴²⁷

Concerning the tradition of athletic training, I have tried to show that, apart from some obvious similarities between athletic regimen and the medical

425 Plato (*Grg.* 501a1–3, ed. Burnet) makes a contrast between medicine and cooking in Gorgias by assuming that medicine 'has considered the nature of what it cares for and the explanation (αἰτίαν) of what it does and can give a rational account (λόγον) of each of these things.' Aristotle's most famous example is to be found in the opening paragraphs of *Metaphysics* 1 (981a12–b6, ed. Ross), where the difference between experience (ἐμπειρία) and art (τέχνη) is illustrated with the difference between a mere medical practitioner, having knowledge (γνώσις) of particulars (τῶν καθ' ἕκαστον) and the facts (τὸ ὅτι), and a scientific physician, having knowledge also of universals (τῶν καθόλου) and causes (διότι).

426 Iamblichus, *VP*, 29 (§ 163–164, ed. Deubner) and 34 (§ 244).

427 Elsewhere I develop this possibility in detail (Bartoš, forthcoming).

dietetics attested in the Hippocratic treatises, such as the preoccupation with exercises (some of which occur also in the dietetic prescriptions) and the specific concern with food, there are also considerable differences between the two fields of expertise, which speaks against the hypothesis that athletic training played a decisive role in the history of medical dietetics. First, while medical dietetics aims at health and its preservation, the goal of athletic training is first of all to achieve the highest possible performance, often at cost of health, and this explains the more or less drastic prescriptions attested for the athletic version of dietetics. And second, athletic training focuses mainly on athletes, a particular minority enjoying an elite social status and demanding a special care from professional trainers and specialized physicians. In contrast to this elite approach, medical dietetics—and this might be one of its specific novelties—focuses for the most part on ordinary men, who do not have athletic bodies or any ambition to succeed in competitive sports, and who rather aim at keeping or improving their own health, which stands as an independent value in their lives.

If my analysis is sound, dietetics, as a theoretically grounded therapeutic technique aiming at restoring and maintaining health, is not attested before the second half of the fifth century BCE. The evidence of the Hippocratic treatises moreover shows that the concept of dietetics undergoes a rapid and dramatic development between the end of the fifth and beginning of the fourth centuries. I certainly cannot exclude the possibility that some pre-conceptions which one might eventually call dietetics existed even before these treatises were written, but (a) we can find hardly any reliable evidence for such conceptions, and even if we imagine them, (b) we should not expect them to include theoretical elaboration and thematic comprehensiveness comparable to the accounts in *On the Nature of Man* and *On Regimen in Health*, not to say in *On Regimen*. The authors of these treatises obviously draw on previous accounts but gradually complement them and thus bring into light new concepts unparalleled before the end of the fifth century.

As Lonie persuasively argues, the structure ‘foods-gruels-drinks’ is almost omnipresent in therapeutic texts, even in those which do not suggest any ‘conscious distinction between dietetics and other forms of therapy in this respect’.⁴²⁸ This is what the author of *On Ancient Medicine* defends as the root of dietetics and medicine in general. But dietetics in this primitive sense ‘is dissimilar enough’ to the dietetics presented by the other Hippocratic treatises which consider dietetics, ‘for that to seem to fourth-century writers such as

428 Lonie 1977, 254.

Plato a new invention'.⁴²⁹ To this primitive dietetic pattern other important dietetic aspects were gradually added, such as the influence of climate and seasons, baths, individual constitutions, age, gender, sexual activities, sleep, walks and other exercises and life activities. Though this is not the case for the 'foods-gruels-drinks' pattern, for the other variables there is some evidence attesting certain developments. These advances can be more appropriately connected with the new approach to health. The new dietetic approach, most typically consisting of foods, drinks, baths and therapeutic walks, is now and again explicitly distinguished from other forms of therapy, such as purging of sputum, evacuation of the bowels, venesection and purges.⁴³⁰ Dietetics is still more often presented as an alternative to pharmacological therapy,⁴³¹ and though *pharmaka* are also occasionally prescribed within a dietetic treatment,⁴³² they are avoided where possible.⁴³³

It seems that these other dietetic variables (i.e. other than 'foods-gruels-drinks') were recognized later, first as important factors influencing human health and thus as helpful in diagnosis, and then also for their therapeutic value. In addition, some of the more complex dietetic theories indicate a concern with prevention, which seems to be a new and relatively late addition to the diagnostic and therapeutic uses of dietetics. There was 'no sharp distinction between therapy and hygiene in this dietetics, which could be applied over a lifetime as hygiene, or as therapy in the case of chronic diseases'.⁴³⁴ This is the aspect of dietetics criticized by Plato in the *Republic*, and found in only

429 Lonie 1977, 259.

430 *Progn.* 15 (L. 2.146–148). In *Morb.* 1.14 (L. 6.164) bloodletting is clearly distinguished from regimen; the author of *Acut. (sp.)* 56–57 (Joly 93.15–94.13 = L. 2.508–512) distinguishes between regimen, fomentation and drugs.

431 *Mul.* 1.11 (L. 8.42), 1.17 (L. 8.56), 1.66 (L. 8.136), 2.115 (L. 8.248–250), 2.118 (L. 8.254–258), *Aff.* 22 (L. 6.232–234), *Loc. Hom.* 23 (Craik 64.11–14 = L. 6.314), *Nat. Hom.* 9 (Jouanna 190.11–12 = L. 6.54). Cf. Plato, *R.* 459c.

432 *Nat. Hom.* 9 (Jouanna 190.11–12 = L. 6.54) advises 'making changes in drugging (ἐν τε τῇ φαρμακείῃ) or in regimen to suit the several conditions of age, season, physique and disease' (trans. Jones). Cf. *Aff.* 22 (L. 6.234.11–12): 'if the patient is helped by the medications and the rest of the regimen . . .' (trans. Potter). The author of *Diseases (Morb.* 2.72 = L. 7.108–110) uses hellebore and other purgative medicine (*pharmakon*) in treatment of *phrenitis* along with drinks and foods prescribed with specific dietetic regards.

433 *Vict.* 3.67 (Joly-Byl 194.10–15 = L. 6.592–594). Cf. *Aff.* 20 (L. 6.230): 'if they do not require the use of medications, then clean by means of regimen' (trans. Potter).

434 Lonie 1977, 259. Van der Eijk 2005, 113 holds that dietetics of this sort should be defined generally as 'a care for the body both—and perhaps predominantly—in healthy states as well as (perhaps secondarily) in unhealthy states, or on the interface between the two, as seems to be the position of the author of *On Regimen*'.

a few Hippocratic treatises, most notably in those entirely devoted to regimen, i.e. *On Regimen in Health*, *Regimen in Acute Diseases*, and *On Regimen*.

The idea of health as a balance of opposite qualities is most probably much older than the concept of medical dietetics I am discussing. Alcmaeon's concept of *isonomia*, presented probably already in the first half of the fifth century,⁴³⁵ is one example, although we do not know whether he ever introduced it into medical practice, and if he did, in what manner.⁴³⁶ In the dietetic tradition this principle is implemented in a more specific concept, namely in the notion of mixture (κρήσις or σύγκρησις), which became a technical term with a glorious future in the later history of dietetics as well as in natural philosophy. As for the constituents of the mixture, some do not specify them, as in *Airs, Waters, Places*, some say that they are innumerable (*On Ancient Medicine* and already Alcmaeon). But when we look into the dietetic prescriptions provided by other Hippocratic authors, we can see that most of them consist of cooling, warming, moistening or drying the body according to the present needs of each individual.⁴³⁷ Even the so-called sacred disease is said to be treatable by the same means.⁴³⁸ Hence the qualities of hot, cold, dry and wet seem to be the most prominent qualities in the dietetic discussions, and Galen even holds that the original doctrine of Hippocrates was built upon them.⁴³⁹

At least three of the most prominent Hippocratic texts explicitly recognize the preventive value of dietetics and, at the same time, attest a special

435 According to Huffman 2013, Alcmaeon is likely to have written his book sometime between 500 and 450 BCE. Guthrie 1962, 358 suggests 480–440 BCE and Lloyd 1991, 168 rather 490–430 BCE.

436 Due to the uncertain authenticity of the wording of this fragment, I do not place any great weight on it in my discussion. Even the key-terms *isonomia* and *monarchia*, which were traditionally believed to be authentic, have been recently challenged by Mansfeld 2013.

437 *Mul.* 1.11 (L. 8.42–48), 1.25 (L. 8.64–68), 1.42 (L. 8.100), 1.44 (L. 8.102–104), 1.51 (L. 8.108–110), 1.66 (L. 8.136–140), 2.116 (L. 8.250–252), *Aff.* 20 (L. 6.228–230), 22 (L. 6.232–234), 37 (L. 6.246), 39 (L. 6.248–250), 51 (L. 6.260), *Flat.* 7 (Jouanna 112.6–10 = L. 100).

438 *Morb. Sacr.* 18 (Jouanna 31.16–33.4 = L. 6.394–396).

439 Galen, *HNH* 13–14 (Mewaldt 9.19–24). Elsewhere Galen ascribes to Hippocrates even the theory of the four elements and holds that he was 'the first to define the qualities that they [i.e. the four elements] have by virtue of which they can mutually act and be acted upon' (*Hipp. Elem.* 5.32 = Lacy 100.20–24, trans. Lacy). Hence Galen asserts that 'Hippocrates is archegete (first founder) in elemental philosophy as well as in medicine' (Smith 2002, 87). Galen is certainly not right in ascribing the invention of the theory to Hippocrates alias the author of *On the Nature of Man*, but he provides clear evidence for the importance of this discussion for the later tradition. On this question see Smith 2002, 86–90 and Jouanna 2012, 313–333.

focus on laymen.⁴⁴⁰ Supposing that a written treatise was a common means of sharing expert knowledge at that time and that medical treatises were read not only by professional physicians but also by laymen, as for instance Xenophon or Plato attest,⁴⁴¹ it is not surprising that dietetic authors, who suggest that everyone, at least in principle, can take care of their own health by changing and moderating their everyday habits and life activities, took advantage of this means of communication. Accordingly, a dietetic treatise can serve as a manual for therapeutic and preventive dietetics, which is of help not only to professional physicians or dietetic advisors, but also, and this might be its main aim, to educated laymen who were interested in medical topics and willing to take the responsibility for their health into their own hands.⁴⁴² *On Regimen* is the most representative example of such a tendency and, at the same time, the most elaborate account of regimen written in the Classical period.

There were many authors writing on the subject after *On Regimen*, though the main principles, topics and goals of medical dietetics had not changed much. The most remarkable advances in the field can be seen partly in particular details,⁴⁴³ and partly in the diversification of the subject. While the comprehensive dietetic theory of *On Regimen* is discussed within one single treatise, albeit a very long one that is divided into four relatively self-standing books, later writings tend to specialize in various partial topics, such as preventive

440 Apart from *Salubr.* and *Vict.*, laymen are occasionally mentioned in *Acut.* (e.g. *Acut.* 6, Joly 38.6 = L. 2.234, or *Acut.* 44, Joly 55.11 = L. 2.318), even though the author evidently writes primarily for physicians.

441 Xenophon, *Mem.* 4.2.10 (ed. Marchant), Plato, *Plt.* 299c6–d1. See also Plato, *Sph.* 232d7–8.

442 This option is most evident in *On Regimen*, but also the format of *Salubr.* allows such an assumption. Cf. Wöhrle 1990, 112: 'Die Diätetik gab dem Laien, dem ἰδιώτης, an den sich, wie wir sahen die beiden Schriften *De victu* und *Salubr.* ausdrücklich wenden, die Möglichkeit an die Hand, im begrenzten Maße für seine Gesundheit selbst zu sorgen...' Wöhrle 1990, 242 also refers to the opening chapter of the Hippocratic *Affections* where he recognizes another example of 'Laienmedizin als Hilfe zur Selbsthilfe'.

443 J. Wilkins, for instance, discusses later additions to the list of foodstuffs mentioned in the second book of *On Regimen* and concludes that all later accounts including Galen show that 'there were issues that were not considered by the Hippocratic author' (Wilkins 2005, 133), though they 'appear to expand what the Hippocratic text offers, and do not take issue with its underlying principles' (p. 132).

dietetics,⁴⁴⁴ dietetics of infants,⁴⁴⁵ travel dietetics,⁴⁴⁶ works on thinning diet,⁴⁴⁷ treatises devoted to regimen for gymnasts,⁴⁴⁸ or to the food qualities and preparation techniques.⁴⁴⁹ Galen discusses dietetics, or some of its partial aspects, in several of his treatises, such as *On the Properties of Foodstuffs*, *Thrasybulus*, *On Barley Soup*, *Exercise with the Small Ball*, *Good Condition*, *The Best Constitution of Our Bodies*, *On the Thinning Diet*, or *On Mixtures*, but most extensively in his *On the Preservation of Health* (or *Hygiene*, i.e. *De Sanitate Tuenda*). Since there are a number of remarkable similarities and overlaps between Galen's *Hygiene* and *On Regimen*, and G. Wöhrle even suggests that Galen, in comparison with his Hippocratic predecessor, introduces nothing substantially new,⁴⁵⁰ in the concluding paragraphs of this chapter I sketch a brief outline of the most remarkable affinities between the two texts.

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- 444 For example Diocles, who wrote a treatise (or rather a letter of dietetic instructions) called *Matters of Health to Pleistarchus* (Ὑγιεινὰ πρὸς Πλείσταρχον), from which Galen on several occasions quotes and on which he even reports textual variants in different copies of the text (*Alim. Fac.* 1.13 = Helmreich 235.12–17), Asclepiades to whom a book entitled *De tuenda sanitate* is ascribed (Celsus, *De medicina* 1.3.17 = Spencer 58.9–10), or Soranus who refers to his own book 'On Hygiene' (*Gyn.* 1.32.1 = Ilberg 21.25; or *Gyn.* 1.40.4 = Ilberg 28.19).
- 445 Already in the Hippocratic *Regimen in Health* infants form a specific category (*Salubr.* 6 = *Nat. Hom.* 21 in Jouanna 214.14–216.3 = L. 6.80–82), Mnesitheus is said to have written a treatise on the nurture of children (περὶ παιδείου τροφῆς, fr. 20, ed. Bertier). Plato discusses in detail questions related to the nurture, regimen and education of children at the beginning of the seventh book of his *Laws* (788a–798d). Soranus gives extensive detailed instructions on the care of newborn babies in *Gynecology* (*Gyn.* 2.9–57 = Ilberg 57.8–93.19), and Galen devotes several chapters in his *Hygiene* (*San. Tu.* 1.7–12 = Koch 16.1–31.30) to the health of children.
- 446 Oribasius reports on the works on regimen for land-travelers (ὁδοιποροῦσι δίαίτια), ascribed to Diocles (fr. 184, ed. van der Eijk), and for those on a sea voyage (πλωιζομένων δίαίτια), ascribed to Dieuches (fr. 19, ed. Bertier).
- 447 Only basic instructions on how to lose or put on weight are given in *Salubr.* 4 (= *Nat. Hom.* 19 in Jouanna 210.7–15 = L. 6.76–78), while Galen devotes a whole treatise to the thinning diet (*Vict. Att.*).
- 448 Galen quotes from Theon's *Gymnastics* in *San. Tu.* 2.3 (Koch 44.15–27).
- 449 Apart from the Hippocratic *On Nutrition*, Mnesitheus is reported to have written a treatise entitled Περὶ ἐδεσμάτων (Galen *Alim. Fac.* 2.59 = Helmreich 321.21–22) or Περὶ Ἐδεστών (Athenaeus, *Deipnosoph.* 2.43.2, 2.49.2, 3.19.10, etc., ed. Kaibel), works *On Digestion* (περὶ πέψεως), *On Vegetables* (περὶ λαχάνων) and *On Cookery* (ὁψαρτυτικά) are ascribed to Diocles (fragments 34, 200, 209 and 234, ed. van der Eijk), a cookery-book (ὁψαρτυτικὸν βιβλίον) and a treatise on nutrition (περὶ τροφῆς) are attributed to Phylotimus (fr. 8, 9, 10, 11, 15, 16, and 20, ed. Steckerl). Cf. Wöhrle 1990, 162–163.
- 450 Wöhrle 1990, 246: '... er nichts hinzugefügt, was nicht grundsätzlich schon vor ihm, zum größten Teil bereits in De victu angesprochen war'.

Galen posits that whoever is able to preserve the healthy proportion (συμμετρία) of the so-called constituent elements (i.e. warm, cold, moist and dry) will be 'a good guardian of health',⁴⁵¹ and this is in perfect accordance with both *On the Nature of Man* and *On Regimen*.⁴⁵² Galen starts his account by introducing principles which underlie human nature as well as the nature of all animals (and up to a point also plants), on a level of generality comparable to that in *On Regimen*. He speaks about generation and ageing mainly in terms of the tension between the moist and dry qualities,⁴⁵³ and supposes that warmth (sometimes ascribed to natural or innate heat), always consuming moisture, produces dryness, and that cold, since it consumes nothing, produces moisture.⁴⁵⁴ During the embryological development the initial moist substance (identified with blood and semen in Galen) dries up as the main bodily structures and organs are formed.⁴⁵⁵ The bodily substances of all animals including man are in perpetual flux,⁴⁵⁶ which can destroy and disperse the bodies unless other similar substances are supplied to replace what has flowed away. All animals (and plants) have innate appetites due to which they naturally replenish what is escaping. 'For we do not learn from anyone how to eat or to drink or to breathe, but from the beginning we have in ourselves the power of doing all these things, without instruction.'⁴⁵⁷

There is a difference between perfect health, defined as a perfectly balanced proportion of opposite qualities, which is hardly attainable since 'absolute perfection is not possible in all lives',⁴⁵⁸ and a health conceived within a certain range (πλάτος), which can be conceived in terms of more and less and which allows us to speak about a relatively healthy state even in the case of a condition which deviates slightly from the perfect balance, 'but not so much as to

451 Galen, *San. Tu.* 1.1 (Koch 3.17–18). Compare Chrysippus' definition of health as the good mixture (εὐκρασία) and proportion (συμμετρία) of hot, cold dry, and moist in the body (Galen, *PHP* 5.2 = De Lacy 300.27–30, cf. Chrysippus, fr. 471, ed. Arnim).

452 Galen also provides an important qualification of the concept: 'health does not consist simply in a proper mixture or proportion of the elements of which we are composed, as almost all our predecessors thought, but merely in that of simple parts' (*San. Tu.* 1.4 = Koch 7.27–31, trans. Green).

453 Galen, *San. Tu.* 1.2 (Koch 4.1–5.34). Cf. *Vict.* 1.3–4 and 33.

454 Galen, *San. Tu.* 6.2 (Koch 170.17–18).

455 Galen, *Temp.* 2.2 (Helmreich 43.17–44.10), *San. Tu.* 1.2 (Koch 4.30–5.2). Cf. *Vict.* 1.9.

456 E.g. Galen, *San. Tu.* 1.4 (Koch 7.1–2). Cf. *Vict.* 1.4–5.

457 Galen, *San. Tu.* 1.2 (Koch 5.24–26), trans. Green; cf. *Vict.* 1.15.

458 Galen, *San. Tu.* 2.1 (Koch 38.13–14), trans. Green.

harm'.⁴⁵⁹ This is more or less the same distinction introduced in *On Regimen* in the opening methodological instructions.⁴⁶⁰

Galen holds that there are many different types of constitutions of the human body, but five out of the six books of his *Hygiene* are devoted primarily to a discussion on how to keep the best constitution in a person's health 'from earliest infancy to extreme old age'.⁴⁶¹ Apart from the best constitution, there are warm and cold constitutions,⁴⁶² anomalous constitutions which exist in many varieties,⁴⁶³ thin and obese constitutions,⁴⁶⁴ and a number of others,⁴⁶⁵ which are not reducible to any scheme guided by a single parameter. A closer analogy to the six bodily constitutions discussed in chap. 32 of *On Regimen*, and the seven mixtures defined in chap. 35 in respect to the capacities of soul, is presented in Galen's *On Mixtures*, where nine constitutions are differentiated according to the predominance of one or two of the four qualities, plus the best and healthiest mixture consisting of a perfectly balanced proportion of all four qualities.⁴⁶⁶

As for the therapeutic aspects, for all constitutions health can be secured by 'making moister those conditions which are too dry, and making drier those which are too moist; and similarly purging the excess of those which are too warm, and restraining the excess of those which are too cool'.⁴⁶⁷ When Galen summarizes the scope of the 'science of hygiene', he mentions things 'to be administered', such as food, drink, 'some kinds of drugs' and the surrounding air; things 'to be done', such as massage, walking, driving a chariot (ὄχησις), horse riding (ἵππασια), and 'all motor activity' including exercise and gymnastics, sleep, wakefulness and sexual activity, and things 'to be applied', such as the surrounding air, bathing and anointing, and 'whatever drug not exceeding the limits of hygiene'.⁴⁶⁸ With the exception of driving a chariot and horse riding, all these variables have been discussed in detail in *On Regimen*. And it is

459 Galen, *San. Tu.* 1.5 (Koch 8.20), trans. Green.

460 *Vict.* 1.2 (Joly-Byl 124.27–126.1 = L. 6.472).

461 Galen, *San. Tu.* 6.1 (Koch 168.26–27), trans. Green.

462 Galen, *San. Tu.* 6.3–4 (Koch 171.29–177.16).

463 Galen, *San. Tu.* 6.5 (Koch 177.17–19).

464 Galen, *San. Tu.* 6.6 (Koch 179.15–180.21).

465 Galen, *San. Tu.* 6.9–12 (Koch 184.19–193.11).

466 Galen, *Temp.* 1.2–3 (Helmreich 2.4–10.3).

467 Galen, *San. Tu.* 1.6 (Koch 14.34–15.1), trans. Green. Galen also quotes the allopathic principle 'opposites are remedies of opposites' (*San. Tu.* 1.7 = Koch 17.1–2, and 5.11 = 163.10, trans. Green), which he borrows from the Hippocratic *Aphorisms* (*Aph.* 2.22 = L. 4.476, cf. *Flat.* 1 = Jouanna 104.11 = L. 6.92).

468 Galen, *San. Tu.* 1.15 (Koch 35.32–36.20), trans. Green.

probably not necessary to repeat that such a complex account is to be found in no other Hippocratic treatise.

Moreover, Galen makes the same distinction as the author of *On Regimen* (*Vict.* 3.68–69) between (a) those who are ‘involved in the business of their occupation’ and for whom ‘it is inevitable that they should be harmed by what they do and that it should be impossible to change it’, and therefore for whom it is ‘impossible to prescribe absolutely perfect care of the body’, and (b) those who are completely free, for whom it is possible to suggest how they may ‘enjoy the most health, suffer the least sickness, and grow old most comfortably’.⁴⁶⁹ ‘The method of hygiene, like every other method, requires this basis of instruction.’⁴⁷⁰

The goal and the intended audience of Galen’s treatise are also similar to *On Regimen*, for both authors clearly address educated laymen who can become the guardians of their own health.⁴⁷¹ As for those of the best constitution, Galen holds that ‘such a man does not need a supervisor who has come to the peak of knowledge . . . For the healthy body itself, impelled by the inclinations of its own nature, will discover everything for itself, and especially if the functions of the mind (ψυχῆς) have been well trained.’⁴⁷² But it is not only those of the best constitution who can use the dietetic manual. Towards the end of *Hygiene* Galen recommends ‘to the educated, . . . for the rest will not read this’ that they observe by what things they are benefited and injured.⁴⁷³ Thus they will have ‘little need of doctors, so long as they are well.’⁴⁷⁴ In the passage below he makes clear that he also expects laymen to read his instructions:

And to all who read this, both laymen and doctors, I would give the common advice not to eat, like most men, as dumb animals do, and be like

469 Galen, *San. Tu.* 2.1 (Koch 38.20–26), trans. Green. As for those who are not entirely free from duties, Galen gives his own example and claims that by adopting the theory of hygiene at the age of 28, he managed to remain healthy, ‘except an occasional transient fever’, even though he himself was neither of the ideally balanced constitution nor free from all duties (*San. Tu.* 5.1 = Koch 136.14–32), trans. Green.

470 Galen, *San. Tu.* 2.1 (Koch 38.27–28), trans. Green.

471 Cf. Wöhrle 1990, 240–245.

472 Galen, *San. Tu.* 2.7 (Koch 59.10–14), trans. Green. Cf. *Vict.* 1.15 (Joly-Byl 136.27–138.1 = L. 6.490), trans. Jones: ‘This too is part of the physician’s art: to do away with that which causes pain, and by taking away the cause of his suffering to make him sound. Nature of herself knows how to do these things’.

473 Cf. *Vict.* 3.71 (Joly-Byl 204.8–10 = L. 6.610), trans. Jones: ‘The wise man, however, should not let things drift, but as soon as he recognises the first signs, he should carry out a cure . . .’

474 Galen, *San. Tu.* 6.14 (Koch 197.16–17), trans. Green.

them, but to judge by experience what foods and drinks are injurious to them and what and how much activities. And likewise also with regard to sex relations, to observe whether they are harmless to them or injurious, and at what interval of days they are harmless or harmful.⁴⁷⁵

In accordance with *On Regimen*, but unparalleled in the other Hippocratic dietetic accounts I have discussed, Galen also indicates the necessity of taking into consideration the therapy of the soul, as, for instance, when he suggests that 'one can train the body to health and good constitution, the soul to obedience and temperance, by saying that one will not provide food for them unless they permit whatever one wishes, bathing or rubbing'.⁴⁷⁶ The health of the soul is assigned, according to Galen, above all to a philosopher, though the hygienist 'must not consider that it behoves the philosopher alone to mould the habit of the soul'.⁴⁷⁷ 'For above all it is necessary to preserve our bodily warmth within the limits of health. And it is preserved by moderate exercise not only of the body but of the soul'.⁴⁷⁸ The distinction between the therapy of the body and therapy of the soul will be discussed in chapter three, where I provide a broader context for the discussion and highlight the unique position of *On Regimen* in the debate.

Another noteworthy topic attested both in Galen's *Hygiene* and *On Regimen* is the use of analogies between arts (and crafts) and human nature. As the author of *On Regimen* holds that in various artistic and craft activities people 'know (γινώσκοντας) what they are doing yet they know not (οὐ γινώσκοντας) what they are imitating',⁴⁷⁹ Galen says that 'the trainer knows (ἐπιστήμων ἐστίν) all the movements made in the gymnasium, but is ignorant (ἀγνοεῖ) what each movement can accomplish'. 'And, to speak comprehensively,' adds Galen, 'all men, both skilled and unskilled, working with their bodies, do not know the effects of their functions (ἀγνοοῦσι τῶν ἐνεργειῶν τὰς δυνάμεις)'.⁴⁸⁰ Besides dancers, sailors, fishermen and farmers, he mentions also professions explicitly discussed in *On Regimen* (*Vict.* 1.12–24), such as gymnasts, carpenters, smiths,

475 Galen, *San. Tu.* 6.14 (Koch 197.2–9), trans. Green.

476 Galen, *San. Tu.* 1.10 (Koch 23.33–24.2), trans. Green (modified).

477 Galen, *San. Tu.* 1.8 (Koch 19.28), trans. Green (modified).

478 Galen, *San. Tu.* 1.8 (Koch 20.1–4), trans. Green (modified). To these instructions an interesting remark of Galen can be added: 'And every year we treat not a few patients for ailments of the soul, by correcting the disorders of its activities' (*San. Tu.* 1.8 = Koch 20.11–13, trans. Green – modified).

479 *Vict.* 1.11 (Joly-Byl 134.22–24 = L. 6.486).

480 Galen, *San. Tu.* 2.11 (Koch 68.25–29), trans. Green.

builders, cobblers, cooks, trainers and physicians.⁴⁸¹ In the next chapter I discuss what these analogies in *On Regimen* illustrate and in what sense they can be helpful for understanding the dietetic theory.

Finally, I would like to mark out an important difference between two divergent approaches to the concept of health found in these texts. In short, the Hippocratic author seems to trust the self-healing capacities of the human body considerably more than does Galen, as is illustrated by the role of the best and healthiest constitution in their accounts. In *On Regimen* (chap. 32) the perfectly balanced constitution certainly is a genuine category of those who do not need any special precaution and remain healthy until quite old age without any dietetic care. In these constitutions it is nature itself that provides the impulses for counterbalancing unfavourable conditions.⁴⁸² In general, Galen agrees that 'in all animals nature is enough to incite the impulses (ὁρμαὶς οἰκείας ἐνθελίνας) appropriate for health and safety (πρὸς ὑγίαν τε καὶ σωτηρίαν),'⁴⁸³ at least as far as movements and exercises are concerned, but in his particular accounts it is not at all clear whether the best constitution is a real category or rather a purely theoretical concept which serves him as a model of comparison for all other constitutions. And not only that, even 'if ever the perfect constitution existed, it would not remain unchanged for an instant'.⁴⁸⁴ Accordingly, even those with the best balanced bodies need to be on permanent guard over their health, for even they are vulnerable to imbalance due to ageing as well as to all the other changes in the dietetic variables. Galen's considerations leave practically no room for a healthy life attainable without dietetic care, and the strong appeal to his readers, bordering on intimidation, to apply dietetic measures to their life is most powerfully expressed in the claim that 'it is likely that those who do not know the hygienic regime will die sooner than in the course of nature (κατὰ τὸν τῆς φύσεως λόγον)'.⁴⁸⁵ This brings us to a discussion on the nature of health and disease in terms of natural teleology and its limits, which

481 Galen, *San. Tu.* 2.11 (Koch 68.29–69.11).

482 Cf. *Vict.* 1.15 (Joly-Byl 136.27–138.1 = L. 6.490).

483 Galen, *San. Tu.* 1.8 (Koch 19.7–8), trans. Green.

484 Galen, *San. Tu.* 1.5 (Koch 14.21–23), trans. Green.

485 Galen, *San. Tu.* 6.1 (Koch 168.13–15), trans. Green. On the other hand, Galen clearly recognizes the enormous difference between the more and the less favourably constituted individuals, for instance when he concludes his treatise with the following assertion (*San. Tu.* 6.14 = Koch 197.9–12, trans. Green): 'For, as I said, some men are greatly injured and some remain uninjured by the same thing until old age. These two classes are rare, however, those that are greatly injured and those that are never injured. But the intermediate range of more or less extends to the great majority of men.'

Galen inherits to a great extent from Aristotle and which will be discussed in more detail in the fourth chapter.

To conclude, seeing all the parallels between *On Regimen* and *Hygiene*, one might be surprised that Galen never mentions his Hippocratic predecessor in the treatise. But Galen does not mention Diocles either, though he was another important forerunner for his own dietetic ideas, even though both authors were read by him and discussed on other occasions. Galen actually follows a similar strategy as the author of *On Regimen* when taking material from earlier authors silently when he agrees with them.⁴⁸⁶ This is a principle of the highest importance for all the following studies, which deal with ideas and topics presented in *On Regimen* as well as in Plato and Aristotle, even though neither of the philosophers ever mentions this source. But this does not necessarily mean, as I will try to substantiate especially in the last chapter, that they did not reflect on the treatise and draw on some of its original conclusions.

486 I owe this remark to J. Wilkins' 'Galen on Good Health' (unpublished book).

Philosophy of the Nature of Man

I maintain that whoever aspires to write properly on human regimen must first acquire knowledge and discernment of the nature of man in general.

(*Vict.* 1.2)

Introduction

It is generally acknowledged that *On Regimen* played a prominent role in the history of Greek dietetics and medicine, but its philosophical significance has been much less appreciated. In this and following chapters, therefore, I would like to focus on the philosophical, epistemological and cosmological contexts of the text. Is it, after all, a relevant piece of evidence for the philosophical tradition represented by authorities such as Heraclitus, Empedocles, Plato and Aristotle? Can we learn from the treatise something about the tradition of natural philosophy or, as it was commonly called before Plato, the ‘inquiry into nature (περὶ φύσεως ἱστορία)’?¹ Does the author, who so proudly claims the originality of his contribution to the field of dietetic therapy and prevention, also bring something new to the field of philosophical speculation about the nature of man? Did *On Regimen* have any impact on its contemporaries or on later authors working in fields other than medicine?

If we are to judge according to standard modern accounts of the development of early Greek philosophy, answers to these questions would have to be, for the most part, negative. With few exceptions,² the Hippocratic evidence in general and that of *On Regimen* in particular is either not taken into account at all, or is mentioned only occasionally in footnotes, sometimes with evident disdain.³ J. Barnes mentions the treatise in his textbook on Presocratics because

1 Cf. Plato, *Phd.* 96a8; Aristotle, *Cael.* 298b2; Theophrastus, *Physicorum opiniones* (ed. Diels), 1.10.

2 E.g. McKirahan 2010, 427–459, who supplements his *Philosophy Before Socrates* with English translations of the Hippocratic *On the Nature of Man*, *On Ancient Medicine* and *On the Art*, the contribution of van der Eijk (2008) to *The Oxford Handbook of Presocratic Philosophy*, or the chapter by Pellegrin (2009) in the Blackwell *Companion to Ancient Philosophy*.

3 Some examples have been already mentioned in the Introduction (pp. 4–5).

of its parallels with Heraclitus, and his severe judgement that *On Regimen* provides only 'a silly farrago of ill-digested Presocratic opinions'⁴ is rather extreme although sadly not far from the mainstream. W. Jones is appreciably more sympathetic to at least some aspects of the treatise and has something good to say about the composition of the text in particular. He characterizes the author as an 'intelligent and progressive eclectic, who combines, instead of merely adding together, the results reached by his predecessors', and concludes that there is, therefore, 'no patchwork effect, so skilfully are the parts woven together.'⁵ Nevertheless, when it comes to evaluation of the philosophical aspect of the text, Jones is very critical indeed and discourages his readers from taking the work too seriously. Though admitting that 'the medical treatises of the Hippocratic Collection sometimes contain a philosophical element', he warns that 'we must not expect of them too much consistency, too much conformity with experience, too much scientific method.'⁶ As far as the scientific method is concerned, Jones holds that theories presented in these treatises (*On Regimen* sits beside *On Nutriment* as his main example), 'cannot always be treated like a truly scientific account', because 'conformity with experience, a *sine qua non* of scientific reasoning, is not to be demanded of works in which imagination plays a large part.'⁷

In response to these critical assessments, which are partly based on anachronistic views on the nature of early Greek science and partly on a rather too narrow approach to the Greek concept of philosophy and its tradition, I shall start in this chapter with an analysis of topics related to the philosophical predecessors and contemporaries of the author. I will begin by briefly illustrating that he builds his account on some of the most powerful philosophical concepts of the fifth century philosophy and develops them into a remarkable synthesis which does not lack original innovations, as it is most evident in chaps. 4 and 5. In the rest of the chapter I shall narrow my focus and examine one of the most prominent philosophical and scientific ideas of the time, namely the concept of *mimēsis*, which is employed in the Hippocratic text in two different contexts, each deserving attention on its own: in the analogies between microcosm and macrocosm, and in the *phusis-technē* analogies.

4 Barnes 1982, 49.

5 Jones 1931, xliii.

6 Jones 1931, xxiv.

7 Jones 1931, xxxix.

1 Reflections on the Philosophical Tradition

As the analysis in the previous chapter revealed, the authors of *On Regimen* and *On the Nature of Man* shared many common views, despite their particular disagreements, and participated in the same discussion concerning the constitutive elements of human nature and their relation to health and disease. The latter author opens his account with a vigorous attack against those who reduce the human body to a single component: first (chap. 1) he mentions physicists⁸ who promote one or another of the elements and relates their accounts to that of Melissus,⁹ and then (in chap. 2) he turn to physicians who posit only one of the bodily humours. His main argument against these monists is based on the premiss that ‘generation cannot take place from a unity’,¹⁰ especially ‘if the combination of hot with cold and of dry with moist be not tempered and equal’.¹¹ According to this argument, no monistic theory can suffice for an explanation of any kind of generation or change, as the author illustrates with the examples of pain (for ‘if a man were a unity he would never feel pain’) and medical therapy (for ‘the cure would have to be one’, although as a matter of fact ‘cures are many’).¹²

It is a commonplace of modern historical narratives that the problem of change, which obviously stands in the background of these discussions, starts with the arguments of Parmenides,¹³ although it is debatable whether there is

8 There is no common name used by the Hippocratic author for those who, in their accounts of the nature of man, go ‘beyond its relation to medicine’ and speculate about elements rather than humours. Accordingly I take the liberty here of exploiting the terminology of Aristotle, who uses the expression ‘physicists’ (οἱ φυσικοί) for those who build their accounts on some of the elements: ‘some declaring air to be the first principle, and others water’ (*Ph.* 184b17–18, ed. Ross, trans. Wicksteed and Cornford).

9 *Nat. Hom.* 1 (Jouanna 166.11 = L. 6.34). Melissus was a fifth century (Kirk-Raven-Schofield 2004, 391 identify his birth as at approximately 500 BCE) follower of Parmenides and proponent of monism. Aristotle dismisses him as a rather simple-minded thinker who argued sophistically and raised no valuable point of discussion (*Ph.* 186a6–10). The author of *On the Nature of Man* illustrates with his example the thinkers who participate in vain discussions ‘for the lack understanding (ὕπὸ ἀσυνεσθίης)’.

10 *Nat. Hom.* 3 (Jouanna 170.8 = L. 6.36), trans. Jones.

11 *Nat. Hom.* 3 (Jouanna 170.11–14 = L. 6.38), trans. Jones.

12 *Nat. Hom.* 1 (Jouanna 168.4–6 = L. 6.34–36), trans. Jones.

13 Cf. Sedley 1998, 233: ‘Parmenides marks a watershed in Presocratic philosophy. In the next generation he remained the senior voice of Eleaticism, perceived as champion of the One against the Many. His One was defended by Zeno of Elea and Melissus, while those who wished to vindicate cosmic plurality and change felt obliged to respond to his challenge.’

a reliable ancient authority for this notion.¹⁴ In any case, Aristotle, who often discusses Parmenides and Melissus together as proponents of an unchangeable unity, holds that the view according to which ‘all existence is one and rigidly unchanging’¹⁵ does not belong to the study of nature (οὐ περὶ φύσεως ἐστὶ σκοπεῖν)¹⁶ but rather to ‘another and higher study’,¹⁷ that is, I assume, to first philosophy. In his discussion of the tradition of natural philosophy, he reports that ‘all authors who investigated into nature (ἅπαντες οἱ περὶ φύσεως)’ agreed with the principle that ‘nothing can come out of what does not exist’ (οὐ γιγνομένου οὐθενὸς ἐκ τοῦ μὴ ὄντος).¹⁸

Supposing that the author of *On Regimen* had the ambition to build his dietetic theory on principles which would not be confined to the limited context of medical therapeutics, as seems to be signalled in the claim that first of all one has to acquire knowledge of the ‘nature of man in general (παντὸς φύσιν ἀνθρώπου);’¹⁹ it is understandable why he attempted to clarify his own position in the same general debate on the elemental constituents depicted in the opening chapters of *On the Nature of Man* and discussed by Aristotle. In what follows I shall argue that, rather than ‘a silly farrago of ill-digested Presocratic opinions’, in the fourth and fifth chapter we find a serious attempt to harmonize the dualistic elemental theory with some of the most important cosmological and epistemological arguments commonly used in the philosophical discussions of the day.

In defence of his theory of fire and water as elements which together ‘separate off from themselves many forms and many kinds, both of seeds and of animals’ and which ‘never stay in the same condition but are always changing to this or that’, the author of *On Regimen* suggests the following explanation:

Empedocles, Anaxagoras, Leucippus and Democritus framed their theories in terms which conceded as much as possible to his rejections of literal generation and annihilation and of division.’

14 Cf. Palmer 2012: ‘Aristotle’s account at *Physics* 1.8.191^a23–33 of the wrong turn he claims earlier natural philosophers took in trying to understand the principles of change has often been thought to legitimate this view, given the Eleatic-sounding argument it records. But Aristotle mentions Parmenides nowhere in the passage, and his complaint is in fact broadly directed against all the early Greek philosophers whose views he has been surveying previously in the book.’

15 Aristotle, *Ph.* 184b15–16, ed. Ross.

16 Aristotle, *Ph.* 184b26–185a1, ed. Ross.

17 Aristotle, *Cael.* 298b14–24, trans. Guthrie. Cf. *Metaph.* 986b14–18.

18 Aristotle, *Ph.* 187a28–35, ed. Ross.

19 *Vict.* 1.2 (Joly-Byl 122.22–23 = L. 6.468).

So of all things nothing perishes, and nothing comes into being that did not exist before. Things change merely by mingling and being separated. But the current belief among men is that one thing increases and comes to light from Hades, while another thing diminishes and perishes from the light into Hades. For they trust eyes rather than mind, though these are not competent to judge even things that are seen. But I use mind to expound thus. For there is life in the things of the other world, as well as in those of this.²⁰ If there be life, there cannot be death, unless all things die with it. For whither will death take place? Nor can what is not come into being. For whence will it come? But all things increase and diminish to the greatest possible maximum or the least possible minimum. Whenever I speak of “becoming” or “perishing” I am merely using popular expressions; but I will show that these are but “mingling” and “separating”.²¹

The author ascribes to the same *ex nihilo nihil fit* principle as the natural philosophers mentioned by Aristotle, and defends it with arguments which have almost verbatim parallels in the fragments of Empedocles and Anaxagoras.²² According to Simplicius, Anaxagoras, for instance, holds that:

The Hellenes follow a wrong usage in speaking of coming into being and passing away; for nothing comes into being or passes away, but there is mingling and separation of things that are. So they would be right to call coming into being mixture, and passing away separation.²³

Empedocles, who posits an elemental theory radically different from that of Anaxagoras, also criticizes the wrong usage of language when people speak of becoming and perishing and subscribes to the same principle as Anaxagoras, which he spells out as follows:

There is no generation of any of all the things that perish, nor any cessation for them of baneful death. They are only a mingling and interchange

20 Cf. Heraclitus, DK 22 B 62 and B 63.

21 *Vict.* 1.4 (Joly-Byl 126.26–128.7 = L. 6.474–476), trans. Jones (modified).

22 For details on this discussion see Joly-Byl 2003, 27 and 30–32, for references to concrete fragments see 126–128.

23 Anaxagoras, DK 59 B 17, trans. Burnet. Cf. Parmenides, DK 28 B 8.27–28.

of what has been mingled. Generation is but a name given to these things by men.²⁴

According to another fragment of Empedocles the four elements are ruled by Love and Strife which both 'gain the upper hand in turn when the time comes round' (ἐν δὲ μέρει κρατέουσι περιπλομένοιο χρόνοιο).²⁵ This interplay between two cosmic protagonists seems to be echoed in the Hippocratic definition of the two elements mastering each other in exchange (ἐν μέρει δὲ ἑκάτερον κρατεῖ καὶ κρατεῖται).²⁶ Empedocles even supplies an argument, again not dissimilar to the one in *On Regimen*, which excludes perishing at the elemental level on logical grounds:

And besides these nothing comes to be or ceases to be,
for if they perished thoroughly, they would no longer be.
What could increase this totality, and whence would it come?
Into what would it perish, since nothing is void of these things?
But these are the very things that are, which running through each other
come to be now this, now that, yet always continuously alike.²⁷

By using the ideas of Anaxagoras and Empedocles, the author of *On Regimen* is perfectly in line with his own methodological guidelines introduced in chap. 2: he adopts statements of his precursors, which he finds to be correct and useful, in their original form, for it is impossible for him to write them 'in some other way'.²⁸ The concept of mingling and separating as the philosophically appropriate explanation for processes commonly called birth (or generation) and death (or vanishing) is expressed in almost exactly the same way as in the extant fragments of Anaxagoras and Empedocles.²⁹ The argument concerning

24 Empedocles, DK 31 B 8: φύσις οὐδενὸς ἔστιν ἀπάντων θνητῶν, οὐδέ τις οὐλομένου θανάτοιο τελευτή, ἀλλὰ μόνον μίξις τε διάλλαξις τε μιγέντων ἔστι, φύσις δ' ἐπὶ τοῖς ὀνομάζεται ἀνθρώποισιν. The specific meaning of φύσις as generation (γένεσις) in this fragment is attested in Aristotelian tradition (e.g. Aristotle, *GC* 314b5–7; Asclepius, in *Metaph.* 311.30–32, ed. Hayduck; Philoponus, in *GC*, 14.14–18 and 15.6–7, ed. Hayduck; Simplicius, in *De caelo* 306.3–4, ed. Heiberg) and remains prevalent in modern scholarship as well (Cherniss 1935, 243–244, Heinimann 1945, 90, Guthrie 1965, 140 n. 1, Barnes 1982, 346, Graham 2010, 347). See also Empedocles DK 31 B 9.

25 Empedocles, DK 31 B 17; cf. B 26.

26 *Vict.* 1.3 (Joly-Byl 126.10 = L. 6.472).

27 Empedocles, DK 31 B 17, trans. Graham.

28 *Vict.* 1.1 (Joly-Byl 122.12–13 = L. 6.466).

29 Cf. Joly-Byl 2003, 27.

the impossibility of perishing may point not only to Empedocles, but in distinguishing between the visible and invisible realms of existence which picks up the traditional identification of Hades with darkness and invisibility,³⁰ it also has a remarkable analogy in Simplicius' testimony, according to which Parmenides says that the Goddess 'sends souls from the visible into the invisible and back again'.³¹

Yet the reflections of the philosophical discussions in *On Regimen* cannot be confined to this Parmenidean tradition, as is evident from the case of Heraclitus, whose influence is even more prominent in the treatise. To start with, the words 'for there is life in the things of the other world, as well as in those of this' are closely paralleled in the Hippocratic *On Nutriment*.³² Both treatises organize a great part of their account around the idea of the unity of opposites, and for this and other reasons the strong Heraclitean tone of both texts has been discussed by many modern commentators.³³ As for *On Regimen*, the following passage, which concludes the discussion of the cosmic principles in chap. 4, serves as the most eloquent example:

The facts are these: becoming and perishing are the same thing; mixture and separation are the same thing; increase and diminution are the same thing; becoming and mixture are the same thing; perishing, diminution and separation are the same thing, and so is the relation of the individual to all things, and that of all things to the individual. Yet nothing of all things is the same. For in regard to these things custom (*nomos*) is opposed to nature (*phusis*).³⁴

Although the opposition between custom or law (*nomos*) and nature (*phusis*) is especially characteristic of the sophistic movement and does not necessarily

30 Plato, *Cra.* 404b1–2, *Phd.* 80d5–7, *Grg.* 493b4–5.

31 Simplicius, *Phys.* 9.39.17–20, ed. Diels (= Parmenides, DK 28 B 13): ταύτην καὶ θεῶν αἰτίαν εἶναι φησι λέγων πρῶτιστον μὲν Ἑρωτα θεῶν μητίσατο πάντων καὶ τὰ ἐξῆς, καὶ τὰς ψυχὰς πέμπειν ποτὲ μὲν ἐκ τοῦ ἐμφανοῦς εἰς τὸ ἀειδές, ποτὲ δὲ ἀνάπαλιν φησιν.

32 *Alim.* 38 (Joly 145.10–11 = L. 9.112). Dating of this text is extremely difficult. Aulus Gellius (*Noctes Atticae* 3.16) and Galen (*Alim. Fac.* 1.1 = Helmreich 209.20–21) both believed that it was written by Hippocrates. Modern suggestions vary from the end of the fifth century (Jones 1923, 339) to the first century BCE (Kudlien 1962, Deichgräber 1973, 12, Althoff, 1998) or even the first century CE (Diller 1936, xxx). Although it seems most probable that *On Nutriment* was written considerably later than *On Regimen*, the remarkable parallels between the two texts deserve more attention than I can give them here.

33 As for *On Nutriment*, see Althoff 1998, 47 and Deichgräber 1973, 7–8.

34 *Vict.* 1.4 (Joly-Byl 128.7–11 = L. 6.476).

derive directly from Heraclitus,³⁵ and despite the fact that most of the particular opposites mentioned in the passage are not Heraclitean but rather allude to Empedocles or Anaxagoras, the puzzling appeal to the grasping of opposites in their unity can be recognized as distinctively Heraclitean, reflecting the famously 'obscure' style of the master, as some have suggested.³⁶ Scholars working on *On Regimen* have suggested that various Heraclitean elements can be identified in the text. The related discussion has, for the most part, been centred around three main questions. First, there has been considerable discussion about whether the Heraclitean ideas were borrowed by the Hippocratic author directly from Heraclitus or from later Heracliteans; secondly whether we can speak about an adoption and genuine elaboration of Heraclitus' ideas or rather about a superficial imitation of his style; and thirdly whether the Heraclitean spirit penetrates the whole account of book 1, or only isolated sections.³⁷

Bernays, one the first modern scholars recognizing the echoes of Heraclitus in book 1 of the Hippocratic treatise, points especially to the long list of *phusis-technē* analogies in chaps. 12–24.³⁸ Some scholars, such as P.S. Schuster and W.A. Heidel, hold that this whole excursion is derived from Heraclitus,³⁹ and C. Fredrich even believed that it was written by a different author than the rest of the treatise.⁴⁰ Although such a radical claim was criticised by later interpreters,⁴¹ and the unity of book 1 is now broadly accepted, there is still very little understanding of the function of this digression and its relation to the rest of the text. In general, modern interpreters often express scepticism about the possibility of understanding these analogies, offering various justifications for such an attitude. To give some examples, H. von Koller believes that the idea of the author that arts and crafts imitate nature is developed only 'superficially and partially', and that some of the examples are invented

35 Cf. Plato, *Grg.* 482e–484c; Aristotle, *SE* 173a7–19. In Heraclitus (DK 22 B 114) we read about one divine law which nourishes all human laws (πάντες οἱ ἀνθρώπειοι νόμοι). For more general discussion on the *phusis-nomos* antithesis see Heinimann 1945, Guthrie 1971, 55–134, McKirahan 2010, 405–426.

36 E.g. Jones 1931, ix–xii, Kirk 1954, 21.

37 For a comprehensive survey of the debate before 1984 see Joly-Byl 2003, 25–27.

38 Bernays 1848.

39 Schuster 1873, Heidel 1914. According to Lebedev 1985, 139, to mention a more recent view, the author of *On Regimen* is 'no doubt inspired by Heraclitus' in some of these analogies. An extensive discussion of the topic is found in Lebedev's Russian edition of Heraclitus' fragments (2014, 27–42).

40 Fredrich 1899, 100 and 115–116.

41 Joly 1960, 35–37, Reinhardt 1916, 57 n. 1, Gigon 1935, 40.

ad hoc in order to promote his ‘absurd Heraclitean thesis’;⁴² Lloyd finds the *phusis-technē* analogies ‘fantastic’ and ‘consisting of vague generalities’;⁴³ and Halliwell speaks about ‘a pseudo-Heraclitian mishmash . . .’⁴⁴ Kirk, who identifies ‘reminiscences of Heraclitus’ in chaps. 3–24, 25 and 35, holds that what often appears to be ‘Heraclitean subject-matter will be found on examination to be purely medical (or Empedoclean, or Anaxagorean) substance clothed in a Heraclitean style.’ The adoption of this style, continues Kirk, ‘tended to influence the author’s thought in the direction of Heraclitean obscurity; in fact there are places in the Heraclitean passages where the Hippocratic author ‘simply did not know what he meant’.⁴⁵

In order to propose an alternative and in my opinion more accurate explanation of the Heraclitean influence in this part of the treatise, in the fourth part of this chapter I shall discuss the *phusis-technē* analogies one by one with the aim being to find for each of them some significance in the author’s explanatory strategy. I will argue that the purpose of most of these analogies is to illustrate some of the principles underlying the account of the nature of man, including the Heraclitean ideas introduced in chaps. 4 and 5.

On Joly’s view, the evidence for a Heraclitean influence is concentrated at the end of chap. 4 and in chap. 5, although in the same breath he adds that these passages do not play any fundamental role within the framework of the first book as a whole.⁴⁶ This is a hasty conclusion that is not well-grounded and in what follows I shall try to introduce an alternative reading. Before commenting on these passages, let me first quote in full the text of chap. 5:

But all things (πάντα), both human and divine (καὶ θεῖα καὶ ἀνθρώπινα), proceed (χωρεῖ)⁴⁷ upwards and downwards by exchanges (ἄνω καὶ κάτω

42 Von Koller 1954, 61.

43 Lloyd 1966, 354. It should be also remarked that later Lloyd 1979, 227 n. 3 writes with more sympathy about ‘the writer’s elaborate comparison between the τέχνη and man’s nature’.

44 Halliwell 2002, 15 n. 34.

45 Kirk 1954, 21.

46 Joly-Byl 2003, 26.

47 Both Greek manuscripts read χωρὶς δὲ πάντα (‘all things are apart’, or metaphorically ‘all things are of different nature’), which makes little sense in this context. Modern editors, therefore, follow Bernays’ emendation to χωρεῖ, though neither is this solution without difficulties, for it invites the Platonic reading expressed in the *Cratylus* (LSJ, s.v. χωρέω suggests a translation ‘to be in motion or flux’ with reference to the *Cratylus* and *On Regimen*). Lebedev 1985 strongly protests against applying this Platonic reading to Heraclitus as well as *On Regimen*. Cf. *Morb. Sacr.* 4 (Jouanna 12.14–16 = L. 6.368) mentioned below (p. 150, n. 205).

ἀμειβόμενα). Day and night, to the maximum and minimum; just as the moon has its maximum and minimum, the ascendancy of fire and of water, so the sun has its longest and its shortest course—all the same things and not the same things. Light for Zeus, darkness for Hades; light for Hades, darkness for Zeus—the things of the other world come to this, those of this world go to that, and during every season throughout every place the things of the other world do the work of this, and those of this world do the work of that.⁴⁸ And what men work they know not, and what they work not they think that they know; and what they see they do not understand, but nevertheless all things take place for them through a divine necessity, both what they wish and what they do not wish. And as the things of the other world come to this, and those of this world go to that, they combine with one another, and each fulfils its allotted destiny, both unto the greater and unto the less (συμμισγομένων πρὸς ἄλληλα τὴν πεπρωμένην μοῖρην ἕκαστον ἐκπληροῖ, καὶ ἐπὶ τὸ μέζον καὶ ἐπὶ τὸ μείον). And destruction (φθορὴ) comes to all things from one another mutually, to the greater from the less, and to the less from the greater, and the greater increases from the smaller, and the smaller from the greater.⁴⁹

As for the parallels with the fragments of the Ephesian, Heraclitus criticizes Hesiod⁵⁰ for not recognizing that ‘day and night are one’,⁵¹ i.e. that they are complementary aspects of the same unit,⁵² which oscillates between two extremities. He also suggests that Hades (as the god of death) and Dionysus (as the god of sexuality, procreation and life as such) are the same,⁵³ and the unity of life and death is illustrated also in other fragments.⁵⁴ Plato ascribes to Heraclitus the idea that ‘everything gives way and nothing stands fast’ (πάντα χωρεῖ καὶ οὐδὲν μένει),⁵⁵ and Heraclitus is credited with the idea that ‘the way up and down is one the same’ (ὁδὸς ἄνω κάτω μία καὶ ὡστή).⁵⁶ Accordingly, the first sentence of chap. 5, to give one of the most widely accepted examples of Heraclitus’ influence,⁵⁷ may appear to be a rather arbitrary combination of

48 Cf. Heraclitus, DK 22 B 62.

49 *Vict.* 1.5 (Joly-Byl 128.12–23 = L. 6.476–478), trans. Jones (modified).

50 Cf. Hesiod, *Theog.* 124.

51 Heraclitus, DK 22 B 57. Cf. DK 22 B 106 and B 67.

52 Kahn 1979, 110.

53 Heraclitus, DK 22 B 15.

54 E.g. Heraclitus, DK 22 B 62 and B 88.

55 Plato, *Cra.* 402a8–9, trans. Reeve. Cf. Plato, *Phlb.* 43a3: αἰεὶ γὰρ ἅπαντα ἄνω τε καὶ κάτω ῥεῖ.

56 Heraclitus, DK 22 B 60. See also B 59.

57 E.g. Burnet 1920, 151, Wasserstein 1960, Joly 1960, 25–26, Barnes 1982, 49.

various segments of Heraclitus' fragments: B 62 (ἄθάνατοι θνητοί converted into θεῖα καὶ ἀνθρώπινα), B 60 (ἄνω κάτω) and Plato's reference (πάντα χωρεῖ). Yet, as I shall attempt to show next, on closer examination there is a strong link between these Heraclitean ideas and some of the most important aspects of the dietetic account.⁵⁸

In chap. 3 we read that fire and water, the elemental constituents of human nature, master each other in exchange: fire, as it consumes the water and advances to its limit, starts to lack nourishment, and likewise water, as it approaches to the limit of the fire, ceases to move. And these reciprocal movements repeat again and again within some unsurpassable limits, 'up to the greatest maximum and the least minimum (ἐς τὸ μήκιστον καὶ ἐλάχιστον) possible'.⁵⁹

From this perspective, chap. 5 seems to aim at illustrating the very same principle with some macrocosmic examples. Three macrocosmic cycles are mentioned here, each of them defining a certain period: the cycle of day and night, the monthly cycle of the moon, and the course of the sun on its annual journey. Among these examples, the ascendancy of fire and water (πυρρὸς ἔφοδος καὶ ὕδατος) is mentioned, not only referring back to the elemental theory but also prefiguring important topics pertaining to some practical aspects of the dietetic account. In later chapters the author speaks about an approach or influx of fire when referring to the annual approach of the sun towards the summer solstice, and about the onset of water as the winter solstice approaches.⁶⁰ These annual changes play an important role in the practical dietetic prescriptions given to people of various constitutions in chaps. 32 and 35. For instance those with a dry and warm constitution, characterized by a mixture of 'the strongest fire and the finest water', tend to fall sick 'at the

58 As it was pointed out to me by Elizaveta Sherbakova, one should also consider the possibility that the phrase πάντα . . . χωρεῖ ἄνω καὶ κάτω ἀμειβόμενα is a verbatim quotation from Heraclitus, which can be supported not only with the references in Plato's *Cra.* (402a8–9: πάντα χωρεῖ) and *Phlb.* (43a3: αἰεὶ γὰρ ἅπαντα ἄνω τε καὶ κάτω ρεῖ), but also in Philo (*De Aet. Mund.* 109, eds. Cohn-Reiter: ὁδὸν ἄνω καὶ κάτω συνεχῶς ἀμειβόμενα) and Lucian (*Vit. Auct.* 14, ed. Harmon: τὰ πάντα . . . ἄνω κάτω περιχωρόμενα καὶ ἀμειβόμενα).

59 *Vict.* 1.3 (Joly-Byl 126.10–11 = L. 6.472).

60 The only passage mentioning 'onsets' or 'approaches' (ἔφοδοι) of the sun is to be found in chap. 38. When discussing various qualities of winds, the author says that when a wind blows to the south, the moisture is drunk up by the sun (ἐκπίνεται τὸ ὑγρὸν ὑπὸ τοῦ ἡλίου) due to the approaches of the sun (διὰ γὰρ τῶν ἐφόδων τοῦ ἡλίου) (*Vict.* 1.38, Joly-Byl 160.19–21 = L. 6.532). In this passage ἔφοδοι probably refer to the increasing intensity of the heat as the wind comes nearer to the southern regions, rather than the approach of sun during the annual cycle.

onsets of fire' (ἐν τῇσι τοῦ πυρός ἐφόδοισιν), while they are healthy 'at the onsets of water' (ἐν τῇσι τοῦ ὕδατος), for moist and cold seasons naturally counterbalance the indisposition of their constitution.⁶¹ Only those of the best constitution, mixed of 'the finest water and the rarest fire', remain resistant to seasonal changes, for 'at the greatest changes in the seasons of the year neither [of the elements] is fulfilled to the extreme limit; the water is not fulfilled to the densest limit at the onsets of the water (ἐν τῇσι τοῦ ὕδατος ἐφόδοισιν), nor is the fire at the onsets of the fire (τοῦ πυρός)'.⁶²

The conjunction of fire and water in chap. 5 with the longest and shortest course of the sun can thus be explained by the dietetic concerns just mentioned.⁶³ But there is another, even more fundamental aspect of the Hippocratic theory for which these examples may provide some support. As discussed in detail in the previous chapter, the author postulates that 'food and exercise, while possessing opposite qualities, work together to produce health',⁶⁴ and also fire and water as the elemental constituents of human nature are said to be 'different in power but working together in their use'.⁶⁵ Hence the concept of the unity of opposites consisting in their cooperation and interdependence is crucial both for the dietetic account and for the elemental theory underlying it. It is therefore not at all surprising that the Hippocratic author employs examples introduced by Heraclitus, the most famous and influential proponent of the principle.⁶⁶

The amplification of the principle in terms of the oppositions light-darkness and Zeus-Hades refers back to chap. 4, where we read about 'coming to light from Hades' and 'perishing from the light into Hades'. Supposing that Hades represents the realm of darkness and invisibility while Zeus stands for light and visibility,⁶⁷ their unity reconciles the opposition between the experience

61 *Vict.* 1.32 (Joly-Byl 148.34–36 = L. 6.510), trans. Jones.

62 *Vict.* 1.32 (Joly-Byl 148.3–6 = L. 6.506).

63 The other examples are less obviously connected to the dietetic theory, apart from the fact that days and months are the most natural intervals into which human lives can be divided, especially when the regular physiological cycles are taken into account, including embryological development, menstrual cycle, fertile days, seasonal diseases or critical days.

64 *Vict.* 1.2 (Joly-Byl 124.6–7 = L. 6.468–470), trans. Jones.

65 *Vict.* 1.3 (Joly-Byl 126.6 = L. 6.472), trans. Jones.

66 The unity of opposites is illustrated in Heraclitus' fragments DK 22 B 8, B 10, B 48, B 50, B 51, B 57, B 67, B 88 as well as in Plato's reference to Heraclitus (*Smp.* 187a3–6). Harmony as a unity of opposites (cf. Heraclitus DK 22 B 8 and B 51) also plays a crucial role in *Vict.* 1.18 (Joly-Byl 138.14–26 = L. 6.492).

67 Cf. Euripides, *Hec.* 68 and 707, ed. Diggle.

of the eyes (and senses in general) and the experience that is graspable only by mind ('for they trust eyes rather than mind, though these are not competent to judge even things that are seen').⁶⁸ According to the senses there is both generation and perishing, while according to the mind there is but mingling and separation. The author presupposes that behind all these phenomena there are some imperishable seeds characterized by a mixture of fire and water, which are constantly undergoing growth or diminution, mixing together and separating from each other. As they commingle and grow, they become visible, i.e. they come from Hades into light, and as they diminish they disappear from our sight, i.e. they perish from the light into Hades. When the author says that the things 'of the other world come to this', that 'they combine with one another', and that 'each fulfils its allotted destiny, both unto the greater and unto the less', he identifies the perspective through which he will describe the development of seed, embryo and foetus in the following chapters, as is illustrated by the following examples.

When the seeds do not flourish in the human body they 'go to the less' and 'are sorted out to the smaller place' (τὰ μὲν ἐπὶ τὸ μείον ἰόντα διακρίνεται ἐς τὴν ἐλάσσονα χώραν).⁶⁹ If man's seed falls into a 'moist place', i.e. into a woman's vagina which is not in the fertile period, it is quenched and 'dissolves into the lesser rank' (διαλύεται ἐς τὴν μείω τάξιν).⁷⁰ When embryos do not manage to achieve the proper arrangement or attunement, 'they change from the greater to the less before their destiny' (ἀμείβει ἐκ τοῦ μέζονος ἐς τὸ μείον πρὸ μοίρης).⁷¹ When everything goes well in the embryonic development, fire arranges the body such that the limbs and organs 'come to light each according to its allotted portion' (ἐς τὸ φανερόν ἀφικνεῖται ἕκαστα μοίρη πεπρωμένη).⁷²

In the light of these examples it is apparent, I believe, that the introduction of some of the most useful and powerful philosophical conceptions of the time, including those ascribed to Heraclitus, right before embarking on the embryological discussion is not a foolish quirk of the author but rather a deliberate methodological step serving the purposes of the subsequent account. The reference to those who do not understand what they do (or rather 'what they are busy with', πρῆσσουσιν) and what they see (ὁρέουσιν), which appears approximately in the middle of chap. 5,⁷³ also seems to foreshadow the main topic

68 *Vict.* 1.4 (Joly-Byl 128.1–3 = L. 6.476), trans. Jones.

69 *Vict.* 1.6 (Joly-Byl 130.6–7 = L. 6.478), trans. Jones.

70 *Vict.* 1.27 (Joly-Byl 144.12–13 = L. 6.500), trans. Jones.

71 *Vict.* 1.8 (Joly-Byl 132.10–11 = L. 6.482), trans. Jones.

72 *Vict.* 1.10 (Joly-Byl 134.10–13 = L. 6.484–486), trans. Jones.

73 *Vict.* 1.5 (Joly-Byl 128.17–18 = L. 6.476).

of the digression into the *phusis-technē* analogies, which opens in chap. 11 with the claim that ‘men do not understand how to observe the invisible through the visible’.⁷⁴ This signals the need for the readers of the account to devote more attention to explanations of the main physiological principles, especially those readers who are not yet aware of them, in spite of the fact that the same principles underlie their daily life activities and common technological processes that they are well acquainted with.

Having discussed some of the similarities, I will now turn to the differences between the theories in *On Regimen* and those attested for Heraclitus. The Hippocratic author would certainly subscribe to the idea that ‘cold warms up, warm cools off, moist parches, dry dampens’,⁷⁵ which was a commonplace in the cosmological, physiological and medical discussions of the day and which is deeply embedded both in the dietetic account of *On Regimen* and its elemental theory. But Heraclitus also holds, at least according to some testimonies, that elements are born one from another: ‘The death of fire is birth for air, and the death of air is birth for water.’⁷⁶ And likewise that souls come into existence and perish in the same cycle of elemental changes, ‘for souls it is death to become water, for water it is death to become earth; out of earth water arises, out of water soul’.⁷⁷ In addition, sun is said to be ‘new every day’.⁷⁸ If one reads these fragments literally, as Peck seems to do, then Heraclitus admits generation and perishing,⁷⁹ which was ‘the vulnerable point in Heraclitus’ armour, where Parmenides wounded him’.⁸⁰ While adopting a similar position as Empedocles, Anaxagoras and other post-Parmenidian thinkers,⁸¹ the Hippocratic author makes sufficiently clear that in his theory there is no place for anything new at all and, accordingly, the Heraclitean cycle of elemental changes cannot be accommodated in his account.

According to other reports Heraclitus’ cycle of elemental changes was explained by changes of fire,⁸² which is itself everlasting and ‘always living’

74 *Vict.* 1.11 (Joly-Byl 134.21 = L. 6.486).

75 Heraclitus, DK 22 B 126, trans. Kahn.

76 Heraclitus, DK 22 B 76, trans. Kahn.

77 Heraclitus, DK 22 B 36, trans. Kahn.

78 Heraclitus, DK 22 B 6.

79 Clement of Alexandria (*Strom.* V.14.104.3 = Heraclitus, DK 22 B 31) believed that the whole world is generated and perishable (γεννητὸν καὶ φθαρτόν) according to Heraclitus.

80 Peck 1928, Appendix, xiv.

81 E.g. Diogenes of Apollonia, DK 64 A 1 (= Diogenes Laertius, *Vitae* 9.57).

82 Heraclitus, DK 22 B 31 and B 90.

(ἀείζων).⁸³ If Heraclitus held such a monistic conception⁸⁴ then it would not be threatened by the Parmenidian attack but it would cause other problems which the Hippocratic author would have to face when drawing on such a doctrine. Monistic theories in general were regarded as unsuitable for medical purposes, as the author of *On the Nature of Man* argues in the passage mentioned above. The concept of balance, which stands as the fundamental principle in all Hippocratic accounts of dietetics including *On Regimen*, presupposes a plurality of elemental opposites which are, at least in principal, equal in power. Supposing, therefore, that Heraclitus posited an everlasting fire as the only principle, some counterpart would be needed for the purposes of the dietetic theory in order to counterbalance the power of fire. On this reading, the original Heraclitean doctrine had to be adjusted according to the advances in medical (or more specifically dietetic) theory which occurred during the second half of the fifth century.

The Hippocratic author thus retains some aspects of the Heraclitean conception of fire whilst modifying them considerably. In Heraclitus fire seems to play leading role in all cosmic processes, it can 'discern (κρινεῖ) and grasp all things (πάντα)';⁸⁵ the author of *On Regimen*, on the other hand, employs fire especially in his description of the biological processes, where it is said to arrange 'all things in the body'⁸⁶ and together with water to separate off (ἀποκρίνονται) many forms and kinds 'of seeds and animals'.⁸⁷ Hence the shift of focus from macrocosmic phenomena and structures to the microcosmic level is remarkably significant. The fire is not a cosmic power, manifested in the sun or thunderbolt,⁸⁸ but rather the innate fire posited as being at the very bottom level of the naturalistic account, immanent in every unit of life, every individual living being and each of its parts. Moreover, in the dietetic account this innate fire is coupled with water as its counterpart and the unity of fire and water, together with their interdependence, is absolutely crucial for retaining the conception of a balanced mixture which signifies the healthy condition. In this sense the presupposed monistic perspective of Heraclitus is replaced with a kind of dualistic approach, which is nevertheless based on the very Heraclitean concept of unity between opposites.

83 Heraclitus, DK 22 B 30: ἦν αἰεὶ καὶ ἔστιν καὶ ἔσται πῦρ ἀείζων; cf. B 64.

84 Cf. Heraclitus, DK 22 B 10: ἐκ πάντων ἓν καὶ ἐξ ἑνὸς πάντα; B 32 and B 41: ἓν τὸ σοφόν; B 50: σοφόν ἔστιν ἓν πάντα εἶναι.

85 Heraclitus, DK 22 B 66, cf. B 64.

86 *Vict.* 1.10 (Joly-Byl 134.5–6 = L. 6.484).

87 *Vict.* 1.4 (Joly-Byl 126.23–24 = L. 6.474).

88 Heraclitus, DK 22 B 64: τὰ δὲ πάντα οἰακίζει Κεραυνός . . . κεραυνὸν τὸ πῦρ λέγων τὸ αἰώνιον.

Some scholars suggest that the idea that fire feeds on water was probably present already in Heraclitus,⁸⁹ and also that some concept of balance must have been inherent in Heraclitus' scheme,⁹⁰ which can be illustrated with the example of sun: 'Sun will not overstep his measures; otherwise the Erinyes, ministers of Justice, will find him out'.⁹¹ Supposing that the sun as the most visible and regular manifestation of fire becomes more powerful as summer approaches, that it accumulates the hot element up to a certain point, and then loses its power towards winter, it is obvious that an unlimited accumulation would destroy this annual balance. Heraclitus stresses the elements of regularity and due measure but it is not clear what exactly secures this cosmic 'Justice', supposing that the allusion to Erinyes is a poetic image and not a naturalistic explanation.⁹² However, even if we admit that some such ideas were at least immanent in the Heraclitean concepts, it is very unlikely that Heraclitus ever discussed, in such a detail as we find it in *On Regimen*, the role of fire in biological processes, such as reproduction or embryonic development, or that he clearly defined fire and water as inseparable and mutually interdependent elements. These topics seem to be added by the Hippocratic author to the original Heraclitean teaching.

From this point of view, we find in *On Regimen* 'a rehabilitation of the doctrine of Heraclitus'.⁹³ Instead of becoming and perishing, life and death, the Hippocratic author introduces mingling and separation, increase and diminution. Nevertheless, he still speaks in terms of mutual processes between

89 E.g. Lassalle 1858, vol. 2, 142, Burnet 1920, 150–152. Peck 1928, xii writes that Burnet 'has shown that even the antithesis of fire and water may have been latent in Heraclitus, inasmuch as Water appears to be the chief among the rest of the substances'. Cf. Kirk 1954, 26: 'Admittedly the idea that fire fed on water is probably present in Heraclitus, but this is a widespread and doubtless almost prehistoric concept.' On this concept, the most important testimony is that of Diogenes Laertius (*Vitae* 9.8–11, ed. Dorandi).

90 Peck 1928, Appendix, xii–xiv.

91 Heraclitus, DK 22 B 94, trans. Kirk, Raven, and Schofield. Cf. B 100.

92 Heraclitus speaks of 'the turning-points' (τροπαί) or 'the measures' (μέτρα) of fire and sun (DK 22 B 30, B 31 and B 94), which Kahn 1979, 140 comments on as follows: 'What Heraclitus' words imply is a direct parallel, in poetic terms an identification, between fire and sun... The measures by which fire is kindled and put out are to be understood as in some sense a re-enactment of the sun's regular course from solstice to solstice. And this link between the annual movements of the sun and the measured death of and revival of fire is reaffirmed in the reference in XLIV [= DK 22 B 94] to the *measures* of the sun's path as a manifestation of the divine order of the cosmos. For the sun the *tropai* are the limits in an annual oscilation, marking the seasons of the year. By analogy the *tropai* of fire will not be stages in a graduated sequence but extreme points in some kind of oscilation.'

93 Peck 1928, Appendix, xii.

opposites within given limits: the greater decreases into the smaller, and the smaller into the greater, the greater increases upon the smaller, and the smaller upon the greater. What therefore remains essential for the Hippocratic author, is the Heraclitean concept of unity between opposites and the 'doctrine of accumulation or oscillation', as Peck puts it,⁹⁴ for oscillation between certain limits is posited for the two elements as well as for everything else: 'all things increase and diminish to the greatest possible maximum or the least possible minimum'.⁹⁵ In *On Regimen* this drawing and repelling is made to depend on the character inherent in the qualities of moist and dry, each of which automatically attracts to itself the other, and the same process bonds together the elements of fire and water, which limit each other and thus keep in balance their mixture. The author of *On Regimen* thus transforms the doctrine of accumulation and oscillation into the doctrine of pulling and pushing illustrated by the analogies with sawing and boring (chaps. 6, 7 and 16). Peck therefore suggests, in allusion to these technical analogies, that 'instead of cosmic fire we now have the cosmic saw . . . permanence instead of transience'.⁹⁶

To conclude this philosophical exposé, another important influence on the author has to be recognized. In the previous chapter I have argued against the hypothesis concerning the Pythagorean origins of medical dietetics, putting stress on the fact that (a) there is hardly any evidence for the existence of medical dietetics before the middle of the fifth century, which seems to rule out any earlier Pythagorean tradition, and (b) that apart from *On Regimen* there is nothing specifically Pythagorean either in the Hippocratic evidence on medical dietetics or in Plato's critical reflections on it. From this point of view, dietetics has developed as a peculiar therapeutic discipline with no decisively Pythagorean influence.⁹⁷ But concerning the discussion of the philosophical

94 Peck 1928, Appendix, xiv.

95 *Vict.* 1.4 (Joly-Byl 128.5 = L. 6.476), trans. Jones. Cf. Heraclitus, DK 22 B 65 and B 111.

96 Peck 1928, Appendix, xv. Alternatively, one can also imagine, as Elizaveta Sherbakova suggested to me, that the image of the cosmic saw goes back to Heraclitus, a claim that the following epigram from Diogenes Laertius seems to support: 'Ἡράκλειτος ἐγὼ τί μ' ἄνω κάτω ἔλκετ' ἄμουςσι; (*Vitae* 9.16, ed. Dorandi).

97 Peck 1928, 124 suggests that some of the most important dietetic doctrines in *On Regimen* and *On Ancient Medicine*, including the notion of *krasis* as a balance of opposites, 'had their origin among Pythagoreans, and especially among those of them who studied medicine, and that department of it which they held to be of singular importance, dietetics.' Other scholars have suggested that the doctrine of symmetry between food and exercise is of Pythagorean origin (e.g. de Vogel 1966, 234, Joly-Byl, 2003, 28). All these conjectures are based almost exclusively on the evidence of Iamblichus (*VP*, 29 § 163–164 and 34 § 244), which I suspect to be anachronistic and unreliable (see p. 99 above).

pedigrees in the particular account of *On Regimen*, especially when the cosmological and embryological aspects are to be discussed, there are conceptions, beliefs and thought patterns which *can* be related to early Pythagoreans and should therefore be taken into consideration, though not without due caution.

To start with, the concept of fire and water, which is related in *On Regimen* to seed and soul, has remarkable parallels recorded for Hippo,⁹⁸ who has occasionally been thought to be affiliated with the Pythagoreans.⁹⁹ But this is most probably coincidental, for some version of the theory of fire and water was possibly present already in Heraclitus, and it was explicitly ascribed to Archelaus of Athens, a pupil of Anaxagoras and a teacher of Socrates.¹⁰⁰ The concept of soul itself is a particularly difficult example of allegedly Pythagorean influence. In chap. 86 there is a passage suggesting that soul enjoys a kind of independence during sleep, which has been often interpreted as an indication of a dualism of body and soul and therefore identified as a Pythagorean or Orphic element in the treatise. This topic will be discussed in detail in the third chapter, where I analyse the concept of soul in all four books of *On Regimen*, compare it with Plato's account of soul in *Phaedo*, which is commonly taken as a paradigm for the Pythagorean and Orphic dualism, and in conclusion suggest that some version of the theory of transmigration lurks in the background of the dietetic account. While this Hippocratic version is considerably different from that of Plato, it is still in line with what Aristotle ascribes to the Pythagoreans and Orphics and should, therefore, be taken into account when considering the pre-Platonic history of the concept. Moreover, in chapter four I will pay attention to the similarities between *On Regimen* and Plato's *Timaeus*, which is another of Plato's texts where strong Pythagorean influence can be identified.

Accordingly, there is a great deal which can ultimately be identified as Pythagorean in *On Regimen*, but this does not mean, of course, either that the author was a Pythagorean or that all these views derived from earlier Pythagorean sources. One can never be cautious enough when discussing these topics. Peck seems to be, at least in some parts of his analysis, a victim of the neo-Pythagorean perspective according to which all valuable and admirable features of Hellenic thought and culture originated from Pythagoras or his followers. But there is one point on which I entirely agree with him, namely that *On Regimen* contains 'some useful evidence of that body of tradition

98 Hippo, DK 38 B 4, A 2, A 3, A 5, A 10, A 11.

99 E.g. Guthrie 1965, 355 and Zhmud 1997, 69–74 hold Hippo as a Pythagorean. Burkert 1972a, 290 n. 62 tries to demonstrate some connections between Hippo's philosophy and that of the Pythagoreans, Huffman 2013 considers him as 'a particularly difficult case'.

100 Archelaus of Athens, DK 60 A 7 and A 1.

which was the foundation upon which the Pythagoreans, and above all, Plato, the greatest of the Pythagoreans, built.¹⁰¹ One of the best examples of the potential of this body of evidence will be discussed in detail in the following sections, in which I focus on the concept of *mimēsis*, which underlies both Pythagorean and Platonic thought, and which was seen as unclear and rather problematic already by Aristotle.

2 *Mimēsis—Status Questionis*

The correspondence between the structures and functions of the human body and those of the cosmos as a whole were noted by many early Greek thinkers, although the pre-Platonic evidence for this fundamental outlook is extremely poor and fragmentary.¹⁰² Already Anaximenes, on the one hand, is credited with the idea that ‘as our soul, being air, holds us together, so does wind or air encompass the whole cosmos.’¹⁰³ On the other hand, terms for macrocosm and microcosm are still missing in Plato,¹⁰⁴ although Democritus is said to have formulated an idea of man as ‘a small world’ (μικρὸς κόσμος),¹⁰⁵ and Aristotle once refers to an animal (ζῷον) as ‘a small world’ (ἐν μικρῷ κόσμῳ) in opposition to the great one (ἐν μεγάλῳ).¹⁰⁶ In Hippocratic treatises, which include some of the earliest non-fragmentary examples of the view, although not of the terminology, the human body is often depicted as a micro-structure analogous to the structure of the whole cosmos; embryological developments are often expounded in terms of analogy with macrocosmic processes; types of human bodily constitutions are likened to the characters of the seasons; and

101 Peck 1928, 124.

102 Sörbom 2002, 19 holds that the concept of *mimēsis* was not a well-articulated theory but rather ‘a fundamental outlook shared by most authors, philosophers and educated audiences in the Classical period, in antiquity as a whole, and even later’.

103 Anaximenes, DK 13 B 2: οἶον ἢ ψυχῇ, φησίν, ἢ ἡμετέρα ἀήρ οὔσα συγκρατεῖ ἡμᾶς, καὶ ὅλον τὸν κόσμον πνεῦμα καὶ ἀήρ περιέχει. The wording of this fragment as well as its contents have been disputed, most forcefully by Reinhardt 1916, 175 and 1926, 210ff. Accordingly, some scholars hold that ‘it is so altered as to distort its meaning’ (Guthrie 1962, 131 n. 1), although Vlastos 1955, 363 n. 55 suggests that ‘though much of the wording of this fragment is doubtful, there is no good reason to doubt that it paraphrases an analogy drawn by Anaximenes himself’.

104 Cf. Olerud 1951, 1.

105 Democritus, DK 68 B 34: ἄνθρωπος μικρὸς κόσμος.

106 Aristotle, *Ph.* 252b24–27, ed. Ross. Conger 1922, 6 holds that this is the first undoubtedly authentic occurrence of the terminology.

the phases of human life are occasionally treated as parallel to the seasonal change from spring to winter.

Some evidence can be found in *Airs, waters places*, which discusses in detail the interaction between the human body and its environment, or in *On the Nature of Man* which develops the connection between humours and seasons. The Hippocratic *On Fleshes* describes in a continuous account both the generation of the whole cosmos and the formation of the individual human body (chaps. 2–14), which comes about from the same elements and by the same processes as the whole universe. The first twelve chapters of the Hippocratic *On Sevens* are dominated by two presuppositions: first that ‘the human body is constructed on the same pattern as the whole world’, and second that everything in the world is arranged in groups of seven.¹⁰⁷ Whilst the hebdomadic principle plays a role in only one chapter of *On Regimen*, the first principle serves as the main guideline in the whole account of the nature of man. Joly suggests that ‘the clearest and most accurate formula articulating the doctrine of macrocosmos-microcosmos’ is to be found in chap. 10 in the phrase ἀπομίμησιν τοῦ ὅλου,¹⁰⁸ and Jouanna interprets this as saying that, according to the Hippocratic account, man was made ‘in imitation of the whole’.¹⁰⁹ Unfortunately it remains unclear what it actually means to be ‘in imitation of’ something, in the particular Hippocratic text as well as in general.

Judging from the extant evidence from the Classical period, the meaning of the terms μίμησις and μιμέομαι seems to differ from author to author and sometimes even from passage to passage. Ancient Greek views on *mimēsis* have often been discussed in modern scholarship, mainly within the field of the history of art,¹¹⁰ and it has been demonstrated repeatedly that the traditional translation ‘imitation’ is not always appropriate for the ancient texts and that in many contexts it is rather misleading.¹¹¹ Despite these suggestions, the tendency to translate and interpret *mimēsis* as ‘imitation’ or ‘copy’ unfortunately still prevails today, both in philosophical and Hippocratic scholarship.

In embarking upon an examination of the roots and variations of the concept of *mimēsis* in general and the value of *On Regimen* for a reconstruction

107 West 1971, 365. Cf. Mansfeld 1971.

108 Joly-Byl 2003, 241. Cf. Olerud 1951, 43–89 who suggests that ‘the whole universe may be treated as an organism with working parts similarly arranged as in man’, which is ‘best illustrated by *De Victu*’. See also West 1971, 386.

109 Jouanna 2012, 195.

110 Cf. Sörbom 2002, 19: ‘The theory of mimesis is now generally regarded as the oldest theory of art’.

111 Cf. von Koller 1954, Else 1958, Halliwell 2002, Sörbom 2002.

of the discussion in particular, it should be remembered that Aristotle had already reflected upon some difficulties with the notion. As we know from him and other doxographers, early Pythagoreans believed that things exist by 'imitation' of numbers, and Aristotle compared the Pythagorean concept with that of Plato, according to which sensible (i.e. material and perishable) things exist by virtue of their participation in non-material and everlasting ideas:

Things of this other sort, then, he [i.e. Plato] called Ideas, and sensible things, he said, were apart from these, and were all called after these; for the multitude of things which have the same name as the Form exist by participation in it. Only the name 'participation' was new; for the Pythagoreans say that things exist by *imitation* of numbers (οἱ μὲν γὰρ Πυθαγόρειοι μιμήσει τὰ ὄντα φασὶν εἶναι τῶν ἀριθμῶν), and Plato says they exist by participation (μέθεξις), changing the name. But what the participation or the imitation of the Forms could be they left an open question.¹¹²

As we are told here, the difference between the Pythagorean and the Platonic concepts was principally terminological, although Aristotle admits that it remains unclear what either concept actually means. Accordingly, until quite recently the difference between the Platonic and Pythagorean concept was believed to be terminological rather than conceptual. But W. Burkert, who initiated a new critical approach to the pre-Platonic Pythagorean doctrines, has suggested in his groundbreaking book 'Lore and Science in Early Pythagoreanism' a remarkable interpretation deserving special attention. I quote the crucial passage connecting his argument with the Hippocratic evidence:

Evidently Aristotle knew the Pythagoreans had used the word *μίμησις*. He surely must have intended to belittle Plato's originality in the doctrines which Aristotle himself disliked. Thus the thought that this Pythagorean *μίμησις* was the same as *μέθεξις*, and therefore implied a theory of ideas, will be seen to be interpretation. Aristotle does give some clues as to how imitation can be understood without a theory of ideas. The word 'immanence' is no help, but he does say that the Pythagoreans supposed they saw *ὁμοιώματα* between things and numbers, and it is only natural to express such similarity or correspondence by the word *μίμησις*. Similarly, in the Hippocratic writings the relation of microcosm and macrocosm becomes a matter of 'imitation', but—and here is the surprising fact—this imitation may be turned either way. One may just as well say that

112 Aristotle, *Metaph.* 987b7–14, ed. and trans. Ross (modified).

the human body ‘imitates’ the cosmos as that the parts of the cosmos ‘imitate’ human organs. In the same way, either the arts imitate nature or nature imitates the arts. Imitation is a two-sided correspondence, which makes it possible to interpret separate things following the same pattern, but without implying differences of rank or a relationship of ontological priority.¹¹³

Burkert uses the Hippocratic evidence in support of his own interpretation of early Pythagorean concepts, for which it obviously has important consequences. Unfortunately, however, he does not sufficiently present and analyse the Hippocratic evidence itself upon which his conclusions concerning the Pythagoreans depend. Possibly as a consequence of this, his suggestion regarding the Hippocratic concept of *mimēsis* has remained more or less unnoticed by modern Hippocratic scholars, who still tend to read it in the ‘Platonic’ sense (as I will call it for the sake of convenience), i.e. as a relation of ontological priority where one thing is imitated as a pattern or paradigm, and the other imitates it as a copy (or a duplicate) derived from it.¹¹⁴ Accordingly, my aim is to reiterate and reinforce Burkert’s thesis by a thorough analysis of the concept of *mimēsis* in *On Regimen*, which is one of the oldest extant, non-fragmentary and non-Platonic pieces of evidence attesting the concept. I shall start with the enunciation of the concept in the macro-microcosmic analogies, and then proceed to the examples of the *phusis-technē* analogies introduced in chap. 12–24.

3 The Analogy of Macrocosm and Microcosm

The author of *On Regimen* describes in chaps. 7–10 how the everlasting seeds enter the human body, how they commingle and grow in men and women and how, after achieving some maturity, they are separated in the form of

¹¹³ Burkert 1972, 44–45.

¹¹⁴ For the ‘Platonic’ reading, Burkert refers to various passages in *Timaeus* but also to the following passage, which provides an illustrative parallel to the analogy of human body and earth discussed in *On Regimen* (chap. 10, discussed below): ‘The earth here, our mother, offers precisely this as sufficient testimony that she has brought forth humans. She first and she alone in that olden time bore food fit for humans, wheat and barley, which are the finest and best nourishment for the human race . . . And such testimonies are to be taken more seriously on earth’s behalf than a woman’s, inasmuch as earth does not mimic woman in conceiving and generating, but woman earth (οὐ γὰρ γῆ γυναῖκα μιμνῆσθαι κούσει καὶ γεννήσει, ἀλλὰ γυνή γῆν)’ (*Menex.* 237e5–238a5, ed. Burnet, trans. Ryan).

male sperm and its female equivalent.¹¹⁵ Then, after joining each other at the right place and at the suitable period,¹¹⁶ a concoction of the seeds which has achieved the right harmony¹¹⁷ gets inflamed¹¹⁸ and the embryological process starts by drawing nourishment from 'the food and breath that enter the woman'.¹¹⁹ Fire as the main moving force forms the body into a structure of organs and passages out of the 'available moisture inside',¹²⁰ with some parts being solidified by fire into the compacted parts 'called bones and sinews'.¹²¹ In the innermost part of the body it makes a structure called κοιλίη. From an anatomical point of view, this organ or structure can be rendered in various ways, most specifically as 'stomach', or more generally as 'belly' including the stomach, intestines and other organs of the digestive system. Most generally it can be understood as referring to all the innards of the human body, including the digestive organs, lungs, heart and all other internal organs surrounded by the compact body of bones, muscles and skin, as we can understand the 'concretion of cold water and moist' in chap. 10 (see below).¹²² Out of this κοιλίη fire makes 'the greatest passage' which serves as a supply tunnel for 'breath and nourishment',¹²³ whilst in the rest of the body it makes some κοῖλαι called φλέβες.¹²⁴ And 'in the middle of these' it coagulates flesh out of the remaining water (i.e. nutrition).¹²⁵ This account culminates in chapter 10, where the mimetic principle is announced:

115 Cf. *Vict.* 1.27 (Joly-Byl 144.4–5 = L. 6.500), trans. Jones: 'And not only the man must do this, but also the woman. For growth belongs, not only to man's secretion (ἀποκριθέν), but also to that of the woman...'

116 Cf. *Vict.* 1.27 (Joly-Byl 144.7–14 = L. 6.500).

117 I shall come back to this topic below on pp. 151–155.

118 This idea will be further discussed in chap. 4 (pp. 245–266) in connection with Aristotle.

119 *Vict.* 1.9 (Joly-Byl 132.14–15 = L. 6.482), trans. Jones.

120 *Vict.* 1.9 (Joly-Byl 132.18–19 = L. 6.482), trans. Jones.

121 *Vict.* 1.9 (Joly-Byl 132.12 = L. 6.482), trans. Jones.

122 As we can see in this and other passages in the treatise, the anatomical description of the inner organs is extremely rudimentary and vague. But we should not forget that unlike other dietetically significant topics mentioned in chapter 2, anatomical knowledge is not mentioned as a precondition for dietetic treatment. Moreover, the whole treatise—including these anatomical speculations—evidently addresses laymen as well as physicians. The embryological account serves as a support to the main dietetic principle (i.e. health as balance between fire and water, activity and nutrition) and draws attention to the correspondence of macrocosmic and microcosmic structures and processes, as we shall discuss shortly.

123 *Vict.* 1.9 (Joly-Byl 132.28–29 = L. 6.484).

124 *Vict.* 1.9 (Joly-Byl 134.2 = L. 6.484).

125 *Vict.* 1.9 (Joly-Byl 134.3–4 = L. 6.484).

In a word, the fire arranged all things in the body by itself properly, as an *apomimēsis* of the whole, small things in relation to great things and great things in relation to small things. [It made] the largest cavity (κοίλη), a store-room for dry water and moist, to give to all and to take from all, [having] the power of the sea, [providing] food for creatures suited to it, [bringing] destruction to those not suited.¹²⁶ And around it [fire made] a concretion of cold and moist water, a passage for cold and warm breath, as an *apomimēsis* of the earth, which alters all things that fall into it. Consuming some things and increasing others, it made a dispersion of fine water and of aerial fire, the invisible and the visible, a secretion from the formed substance, in which all things are carried and come to light, each according to its allotted portion. And in this fire made three circuits, extending to each other inwards and outwards: one extending towards the cavities (τὰ κοῖλα) of the moist [having] the power of the moon; another extending towards the outer circumference, towards the solid enclosure [having] the power of the stars; the middle circuit extends both inwards and outwards <having the power of the sun>.¹²⁷

For the sake of clarity and in order to avoid the confusion caused by the standard translations ‘copy’ or ‘imitation’, I have left the crucial term *apomimēsis* in our passage untranslated.¹²⁸ For our discussion it is important to consider that the formula ‘small things in relation to great things and great things in

126 Cf. Heraclitus, DK B 61.

127 *Vict.* 1.10 (Joly-Byl 134.5–16 = L. 6.484–486), trans. Jones (significantly modified). The last words in brackets (<ἡλίου δύναμιν ἔχουσιν>) were added to the text by Joly and Byl. The identification of the middle sphere with the sun can be inferred from the parallel passage in chap. 89 (*Vict.* 4.89, Joly-Byl 220.22–23 = L. 6.644), and the verb ἔχουσιν fits well with the three successive occurrences of δύναμιν with the genitive, cf. Joly-Byl 2003, 242. As for the plurals in the last sentence (αἱ μὲν . . . αἱ δὲ . . . αἱ δέ), I take it as corrupted text, since the parallel in chap. 89 clearly indicates singulars (Joly-Byl 220.22–23 = L. 6.644: ἄστρον μὲν οὖν ἢ ἕξω περίοδος, ἡλίου δὲ ἢ μέση [sc. περίοδος], σελήνης δὲ ἢ [sc. περίοδος] πρὸς τὰ κοῖλα). Cf. Jouanna, 1998.

128 Others translate ἀπομίμησις as ‘copy’ (Jones 1931, 247), ‘copie’ (L. 6.485), ‘imitation’ (Joly 1967, 12, Joly-Byl 2003, 135, Jouanna 1998, 162), or ‘Nachbildung’ (Fuchs 1895–1900, vol. 1, 294, Kapferer 1933–40, vol. 1.3, 35). From the etymological point of view the prefix ἀπο might suggest a kind of derivativeness, since it usually means ‘from’, but at least one passage in Plato (*Cra.* 427a–c) evidently shows that this does not have to be always the case. Moreover, there does not seem to be a clear difference between ἀπομίμησις and μίμησις in *On Regimen*.

relation to small things' suggests some kind of reciprocity or mutual relationship between greater and smaller structures, and probably expresses the essence of the macro-microcosmic analogies.¹²⁹

The intention of the author, I believe, is to show that fire forms organs and structures in the body which resemble some of the macrocosmic structures in their shape or function. The capacity of the sea to assimilate and decompose organic materials (λαβεῖν παρὰ πάντων) and to provide nutrition (δοῦναι πᾶσι)¹³⁰ should apparently illustrate the digestive and nutritive capacity of the largest cavity (κοιλίη) in the centre of the body. I have already mentioned the difficulties in finding a specific anatomical equivalent for the term but, no matter what organ or anatomical structure corresponds to the expression κοιλίη here, its central position and also developmental priority over the other organs confirms the crucial role of nutrition in the suggested dietetic account based on the reciprocity of life-activity and nutrition. The function of the central κοιλίη is illustrated by the potency of sea, which, according to this analogy, provides nutrition for living beings.¹³¹ Accordingly, all the bodily organs (πάντα) are formed by fire into a functional organism, which should first of all exercise the capacity to digest various kinds of food, to transform them into nutrition and, finally, to use this nutrition for the physiological needs of the organism, as is illustrated by 'the earth which alters all things that fall into it'.

Towards the end of our passage the author returns to the topic of the three circuits made by fire in the body (already introduced in chap. 9) and the circuits themselves are formulated as a concentric structure. Each of them is connected with the power (*dunamis*) of some of the celestial bodies, namely the moon, sun and stars.¹³² The author does not explicitly say that the three bodily circuits are made as an *apomimēsis* of the orbits of stars, sun and moon, but it is the power or potency (*dunamis*) which concerns him here. Anyway, the micro-macrocosmic analogy between the circuits in the body and the orbits of celestial bodies seems to follow from the initial claim that fire arranged all things in the body 'as an *apomimēsis* of the whole'. Here we have

129 Cf. *Hebd.* 6.1.1–3 (ed. West = L. 8.637): 'Quae autem in terra sunt corpora et arbores naturam similem habent mundo, quae minima et quae magna; necesse est enim mundi partes, cum sint omnia similiter, comparari mundo ...'

130 Cf. *Hebd.* 1.2.10–11 (ed. West = L. 8.635).

131 It actually provides nutrition not indiscriminately for all creatures but only for those which are adapted to life in the sea or to nutrition provided by sea, i.e. only for some biological species.

132 Strictly speaking, the identification of the middle sphere with the sun is not explicitly mentioned here, but it can be inferred from the parallel passage in chap. 89 mentioned below.

the clearest example in the treatise of the resemblance of the whole macrocosmic structure (not only its individual parts like earth and sea in the preceding text) to the overall structure of human body.

The analogies between micro- and macrocosm also play an important role in chapters 89 and 90 of book 4 where they serve specific diagnostic purposes. At the beginning of chapter 89 the author suggests that seeing the heavenly bodies clear, dry and in the proper order indicates health, whereas seeing anything contrasting with these conditions indicates illness of the body.¹³³ Immediately after this he reiterates what was already said in chapter 10: 'The outer circuit belongs to the stars, the middle circuit to the sun, the circuit towards the cavities belongs to the moon.'¹³⁴ This sentence serves as a reminder of the correspondence between the macrocosmic structure of three concentric spheres (moon-sun-stars) and the parallel arrangement of the human body.¹³⁵ This is the essential prerequisite of the dream diagnosis, for seeing heavenly bodies and other macrocosmic phenomena in our dreams serves as a clue for the diagnosis of the dreamer's body. A healthy condition is signified, for instance, when the sun, moon, heavens or stars in the dream appear to be 'pure and bright',¹³⁶ or when a heavenly body appears to be pure and bright and falls away from its orbit towards the east.¹³⁷ On the other hand, diseases are indicated whenever a heavenly body seems to be dark and dull, and to move towards the west, or into the sea, or into the earth, or upwards.¹³⁸ When the motion is upwards, it means fluxes of the head; when into the sea, diseases of the bowels; when into the earth, tumours growing in the flesh.¹³⁹

Some other examples of the diagnostic implication of the micro-macrocosmic analogies are used in chapter 90: for instance, fruitless trees signify 'corruption of the human seed';¹⁴⁰ rivers in abnormal conditions indicate

¹³³ *Vict.* 4.89 (Joly-Byl 220.18–21 = L. 6.644).

¹³⁴ *Vict.* 4.89 (Joly-Byl 220.22–23 = L. 6.644): ἄστρον μὲν οὖν ἡ ἕξω περίοδος, ἡλίου δὲ ἡ μέση, σελήνης δὲ ἡ πρὸς τὰ κοῖλα.

¹³⁵ Again, it is quite unclear to what the expression τὰ κοῖλα refers and whether the whole sentence describes the macrocosmic or rather the microcosmic structures. Jones takes it macrocosmically and suggests that τὰ κοῖλα means here 'the concavity of the inmost sphere, by which we are surrounded' (Jones 1931, 427 n. 39). Joly and Byl 2003, 221 read it in a similar way: 'la concavité (de la sphère intérieure)'. Jouanna 1998 persuasively argues for the microcosmic reading.

¹³⁶ *Vict.* 4.89 (Joly-Byl 220.18 = L. 6.644).

¹³⁷ *Vict.* 4.89 (Joly-Byl 222.31–33 = L. 6.650).

¹³⁸ *Vict.* 4.89 (Joly-Byl 224.3–4 = L. 6.650).

¹³⁹ *Vict.* 4.89 (Joly-Byl 224.4–6 = L. 6.650).

¹⁴⁰ *Vict.* 4.90 (Joly-Byl 226.10 = L. 6.654), trans. Jones.

‘a circulation of the blood’;¹⁴¹ high water indicates excess of blood, low water deficiency of blood;¹⁴² springs and cisterns indicate ‘some trouble of the bladder’;¹⁴³ a troubled sea indicates ‘disease of the belly’;¹⁴⁴ to see the earth flooded by water or sea indicates ‘a disease, as there is much moisture in the body’.¹⁴⁵ It is ‘not good’ either, according to the author, ‘to see the earth black or scorched, but there is a danger of catching a violent, or even a fatal disease, for it indicates excess of dryness in the flesh’.¹⁴⁶ If the dreamer thinks that he is diving in a lake, in the sea, or in a river, ‘it is not a good sign, for it indicates excess of moisture’.¹⁴⁷

These examples of dream symbolism obviously raise two fundamental questions: What is the relation between particular macrocosmic objects and their bodily counterparts in general? And, specifically, what is the causal connection between the affected parts of the human body and their dream representations? As for the second question, it is presupposed that the mechanism of the symbolic representations is mediated by soul, which performs in dreams ‘all the functions of body and of soul’.¹⁴⁸ Simply said, ‘as the experiences of the body are, so are the visions of the soul when sight is cut off’.¹⁴⁹ But in order to answer the first question, something more has to be added. Supposing that the relation between the macrocosmic structures seen in dreams and the bodily organs is not simply a haphazard symbolism (at least not from the author’s point of view), and that the passage in chap. 89 speaking about the three circuits in the body refers back to the embryological passage in chap. 10, it is most probable that the relation between the human body and macrocosm should be secured and explained by the concept of *mimēsis*. According to the ‘Platonic’ reading, the micro- and macrocosmic phenomena should correspond to each other because all the bodily structures were made by fire ‘as an imitation of’ the macrocosmic objects, which is an explanation that poses serious interpretative difficulties. Why, for instance, should human seed be made ‘as a copy’ of fruiting trees rather than the other way round? That is, what is the ontological

141 *Vict.* 4.90 (Joly-Byl 226.14 = L. 6.654), trans. Jones.

142 *Vict.* 4.90 (Joly-Byl 226.13–15 = L. 6.654).

143 *Vict.* 4.90 (Joly-Byl 226.17 = L. 6.656), trans. Jones.

144 *Vict.* 4.90 (Joly-Byl 226.18–19 = L. 6.656), trans. Jones.

145 *Vict.* 4.90 (Joly-Byl 226.24–25 = L. 6.656), trans. Jones.

146 *Vict.* 4.90 (Joly-Byl 226.27–29 = L. 6.656), trans. Jones.

147 *Vict.* 4.90 (Joly-Byl 228.3–4 = L. 6.658), trans. Jones.

148 *Vict.* 4.86 (Joly-Byl 218.11–12 = L. 6.640), trans. Jones.

149 *Vict.* 3.71 (Joly-Byl 204.5–6 = L. 6.610), trans. Jones.

or cosmological priority of trees over humans and other animals? And why should fire, while forming a human body, make organs (like the bladder) as ‘an imitation’ of artificial objects (like cisterns, φρέατα)? This would actually contradict the account in chap. 11–24, where—according to the same logic depending on the ‘Platonic’ reading, as I will illustrate in the next section—arts and crafts should ‘imitate’ the natural processes and organic structures, but not *vice versa*. Burkert’s reading can save us from these difficulties, and for the purposes of the dream diagnosis it is perfectly sufficient. In order to interpret dream visions in relation to the bodily conditions, all we need to know is that the micro- and macrocosmic structures correspond to each other simply because they share certain universal principles immanently present at all levels of reality. The dreaming soul apparently follows these universal principles and visualizes the bodily states in the form of dream visions. We can remember our own visions, but unless we are trained in the dream interpretation, we cannot understand that they actually reflect our bodily state of health. In other words, by understanding the micro-macrocosmic analogies we can learn from the visible (i.e. dream visions) about the invisible (i.e. the affections inside the body). And accordingly, to return to the embryological context of chapter 10, by understanding the visible natural structures and processes of the macrocosmic phenomena, we can learn about the structures and function of the inner organs of the human body, which are inaccessible to human sight. The principle of learning from the visible about the invisible will be announced in chap. 11, that is immediately after the introduction of the mimetic principle in chap. 10, and before the extensive excursion into the analogies between *physis* and *technē* in chapters 12–24, which I discuss next.

4 The Analogy of Physis and Technē

The account of human nature in book 1, which is devoted for the most part to embryology from chap. 6 onwards, is suddenly interrupted in chap. 11 with some remarks on the difference between the visible and invisible, followed by a long excursion into the *physis-technē* analogies. Only after this long account (chap. 12–24) does the author return to the discussion of embryology and other topics concerning the nature of man. The extensive length of this excursion, which occupies no less than 20% of the whole text of the first book, suggests its unique role and importance, as does its central position within the book. In what follows I will try to illuminate the purpose of this excursion by commenting on each of these analogies (with the exception

of chap. 24).¹⁵⁰ I will not proceed in exactly the same order as they are presented in the text, but I group them, for the sake of clarity, according to my understanding of their contents.

4.1 *Seeing the Invisible by Means of the Visible*

Drawing analogies between visible and invisible phenomena was one of the most common methodological features of early Greek philosophy and science in general. Besides the famous dictum ὄψις τῶν ἀδῶν τὰ φαινόμενα ascribed to Anaxagoras, a similar idea can be also found in the Classical period in Herodotus, Democritus, Diocles of Carystus and in several Hippocratic treatises,¹⁵¹ and examples of its application are innumerable. Despite almost universal utterance of this procedure, there is only scarce evidence for its theoretical foundations, which makes the text of *On Regimen* an extremely important testimony.

The embryological account preceding the long excursion into *phusis-technē* analogies describes processes which are for the most part hidden from human sight. Chap. 11 therefore opens with the Anaxagorean principle announced in a negative form, 'men do not understand how to observe the invisible through the visible',¹⁵² indicating a significant scepticism concerning the capacities of common men to understand their own nature. The distinction between invisible and visible is then illustrated with the difference between human *phusis* and *technai*: 'For though the arts they employ are like (ὁμοίησιν) the nature of man, yet they know it not.'¹⁵³ Even though men are for the most part not aware of the resemblance between the nature of man and the arts and crafts, they all have an innate mimetic capacity, which they employ in everyday activities but which they are not used to activate in reflections on their own nature: 'For the mind of the gods taught them how to make them (i.e. the arts) exactly like (μιμῆσθαι) their own [functions],'¹⁵⁴ and though they know what they are

150 The analogies in chap. 24 are rather exceptional and will be discussed further in the next chapter (pp. 219–220) in the context of the authors attitude towards morality and human conventions.

151 Anaxagoras, *DK* 59 B 21a; Herodotus, *Hist.* 2.33 (ed. Legrand); Democritus, *DK* 68 A 111; Diocles, fr. 56b (ed. van der Eijk); Hippocratic *VM* 22 (Jouanna 149.1–152.17 = L. 1.626–634), *De arte* 12 (Jouanna 240.1–241.11 = L. 6.22–26); *Flat.* 3 (Jouanna 105.12–107.9 = L. 6.92–94).

152 *Vict.* 1.11 (Joly-Byl 134.21 = L. 6.486), trans. Jones.

153 *Vict.* 1.11 (Joly-Byl 134.22 = L. 6.486), trans. Jones.

154 I have arrived at this translation from 'to copy their own functions' (as in Jones) by replacing the problematic verb 'copy' with periphrasis 'to make something exactly like something else'.

doing yet they know not what they are expressing.¹⁵⁵ The last sentence points to one of the main principles which have been employed already in the elemental theory (chap. 3 and 4), introduced within a broader context in chap. 4 and 5, and which are illustrated in a number of the *phusis-technē* analogies, namely the unity of opposites. The following list of examples emphasises this principle in all its generality and ambiguity:

For all things are like (ὅμοια), though unlike (ἀνόμοια), all compatible (σύμφορα) though incompatible (διάφορα), conversing (διαλεγόμενα) through not conversing (οὐ διαλεγόμενα), intelligent (γνώμην ἔχοντα) though without intelligence (ἀγνώμονα).¹⁵⁶

The opening words of the chapter ('men do not understand') clearly indicate a possible difficulty which a reader might have encountered when reading the account of human nature presented so far. Foreseeing this obstacle, the author presupposes that reader's understanding can be substantially improved with a help of the *phusis-technē* analogies. The detailed discussion of these analogies apparently aims at teaching the readers how to understand principles which are common to arts and crafts, on the one hand, and various aspects of human nature on the other. The fact that these phenomena are analogical is explained by the idea that there is some unique capacity (i.e. μιμεῖσθαι τὰ ἐωυτῶν) which men have received from gods, even though they are mostly not aware of it.

In connection with the previous analysis of the concept of *mimēsis*, it is remarkable that the same principle is expressed here in terms of 'likeness' (ὁμοίησιν, ὅμοια), which reminds us of Aristotle's account of the Pythagorean version of *mimēsis* ('they saw ὁμοιώματα between things and numbers').¹⁵⁷ Actually, the whole excursion into the *phusis-technē* analogies starts in chap. 12 with a claim that the author 'will show that arts are like (ὁμοίας ἐούσας) the affections of man, both visible and invisible'¹⁵⁸ and concludes in chap. 24 by saying that 'all the arts have something in common (ἐπικοινωνέουσιν) with the nature of man'.¹⁵⁹ Neither is the resemblance between the discussed arts and the corresponding aspects of human *phusis* always expressed by the verb *mimeomai*:

155 *Vict.* 1.11 (Joly-Byl 134.22–24 = L. 6.486).

156 *Vict.* 1.11 (Joly-Byl 134.24–25 = L. 6.486), trans. Jones.

157 Aristotle, *Metaph.* 985b27, ed. Ross.

158 *Vict.* 1.12 (Joly-Byl 136.5–6 = L. 6.488), trans. Jones (modified).

159 *Vict.* 1.24 (Joly-Byl 142.4–5 = L. 6.496), trans. Jones.

it is often articulated by the phrases ταῦτὰ πάσχει,¹⁶⁰ ταῦτὰ πάσχουσι,¹⁶¹ τοιαῦτα ἔχει,¹⁶² or simply τῷτῷ,¹⁶³ and eventually ταῦτὰ διαπρήσσονται.¹⁶⁴ It seems that all these expressions are supposed by the author to be more or less synonymous with the verb *mimeomai*,¹⁶⁵ and that the primary aim of all these analogies is to point out certain resemblances between two phenomena, out of which, as a rule, one is a specific feature of human *phusis* and the other is some well-known or easily observable phenomenon which serves as an illustration for the first. The artificial procedures are supposed to be based on the same universal principles as the natural procedures, and understanding these universal principles in the technological context might facilitate the reader's understanding of the nature of the physiological processes, which are themselves necessary for the appreciation and application of the dietetic treatment and prevention. This didactic strategy is intended, I assume, in all of the examples of the *phusis-technē* analogies in chap. 12–24, even though in some of them it is easier for a modern reader to identify, whilst in others it unfortunately remains rather obscure and puzzling.

In chap. 12, the first analogy concerns the art of seercraft (μαντική),¹⁶⁶ which is introduced as follows:

By the visible (τοῖσι φανεροῖσι) it [i.e. seercraft] gets knowledge of the invisible (τὰ ἀφανέα γινώσκει), by the invisible knowledge of the visible, by the present knowledge of the future, by the dead (τοῖσιν ἀποθανοῦσι) knowledge of the living (τὰ ζῶντα), and by means of that which understands not men have understanding—he who knows (ὁ μὲν εἰδώς), right understanding always (ἀεὶ ὁρθῶς), he who knows not, sometimes right

160 *Vict.* 1.13 (Joly-Byl 136.17 = L. 6.488), *Vict.* 1.14 (Joly-Byl 136.23 = L. 6.490), *Vict.* 1.21 (Joly-Byl 140.8 = L. 6.494).

161 *Vict.* 1.22 (Joly-Byl 140.14 = L. 6.494).

162 *Vict.* 1.15 (Joly-Byl 138.2 = L. 6.490).

163 *Vict.* 1.19 (Joly-Byl 138.29 = L. 6.494). Cf. *Vict.* 1.15 (Joly-Byl 136.25 = L. 6.490) where ms. M reads τῷτῷ and ms. P reads *similia*.

164 *Vict.* 1.24 (Joly-Byl 140.28–29 and 30 = L. 6.496).

165 We can also find the same terminological vagueness in the sixth chapter of *On Sevens*. The nature of the relationship between the seven parts of the world and the seven parts of the human body 'is expressed indifferently in terms of similarity, imitation (of man by the world!), or identity' (West 1971, 377).

166 Cf. *Acut.* 8 (Joly 39.12–20 = L. 2.240–244), where the fact that physicians are not able to come to agreement in their recommendations results in an objection of laymen that medicine resembles divination, which is taken as 'a scandal for the art', as Lloyd 1979, 227 n. 3 puts it.

understanding, sometimes wrong (ἄλλοτε ἄλλως). Seercraft herein resembles (μιμεῖται) human nature and the life of man (φύσιν ἀνθρώπου καὶ βίον).¹⁶⁷

After these introductory comments a series of examples follows. The first one concerns pregnancy and illustrates how one can acquire knowledge of invisible things and future events by proper interpretation of available phenomena: 'A man by union with a woman begets a child; by the visible he gets knowledge of the invisible (τῷ φανερώ τὸ ἄδηλον γινώσκει) that so it will be'.¹⁶⁸ This example, I suppose, alludes to common experience that an early stage of pregnancy can be diagnosed by accompanying symptoms, such as the loss of menstruation, changes in taste,¹⁶⁹ nausea or a pale complexion.¹⁷⁰ From these signs one can make an inference about the existence of a foetus that is hidden from sight.

The second example suggests that knowledge of the visible can be acquired by something invisible: 'The invisible human mind (γνώμη ἀνθρώπου ἀφανής), getting knowledge of the visible, changes from childhood to manhood; by the present it gets the knowledge of the future'.¹⁷¹ As for the last clause, a convenient example of how one can gain knowledge of future events has been given in the case of pregnancy, and the same principle underlies medical diagnosis as such. The assertion concerning the development of mind 'from childhood to manhood' is comparable to a passage of the sixth book of *Epidemics* where we read that 'the soul of man grows until death'.¹⁷² As for the human nature and life, it is clear that the author speaks here about acquiring knowledge of the visible phenomena by means of the invisible mind, which links to the claim in chap. 4 that the author himself uses mind to explain things that are visible. But for the art of divination it remains rather unclear how one gets 'by the invisible knowledge of the visible'.¹⁷³

167 *Vict.* 1.12 (Joly-Byl 136.6–9 = L. 6.488), trans. Jones (modified).

168 *Vict.* 1.12 (Joly-Byl 136.9–10 = L. 6.488), trans. Jones.

169 Cf. *Aph.* 5.61 (L. 4.554).

170 E.g. *Mul.* 1.34 (L. 8.78–82). Cf. Aristotle, *HA* 584a2–25, ed. Louis.

171 *Vict.* 1.12 (Joly-Byl 136.10–11 = L. 6.488), trans. Jones (modified).

172 *Epid.* 6.5.2 (Roselli 106.1 = L. 5.314), trans. Smith.

173 Supposing that gods can occasionally be described as invisible, perhaps the gods are meant to bring prophecy to men through poets and diviners who serve them as mediums (cf. Plato's *Ion*, 534b–d, quoted below), and thus from the invisible gods we can learn about the visible things and events. Alternatively, with regard to the analogue with the unconscious belly announcing hunger (quoted below), and supposing that whatever is hidden in the body can be taken as invisible though, for instance, audible, some kind of gastromancy, i.e. divination by means of the sounds or even voices coming from belly,

The reference to the possibility of acquiring knowledge of the living by the dead, which might be understood as an allusion to some hieromantic technique (where entrails of sacrificed animals serve as omens, as in hepatoscopy or extispicy), or to necromancy (where the dead were spoken to), is paralleled on the side of human nature and life by the claim that ‘a corpse is not like a living creature; by the dead a man knows the living’.¹⁷⁴ This can be understood as pointing to the experience of an encounter with a corpse: seeing a dead body with the same shape as a living one but exhibiting no signs of life provides a quite self-explanatory illustration of the essential distinction between life and death.

In order to elucidate the claim that ‘by means of that which understands not men have understanding’, whatever it means in the art of divination,¹⁷⁵ the author introduces as an example the stomach (γαστήρ), which is ‘without consciousness (ἄσύνετον),¹⁷⁶ yet by it we are conscious (συνίεμεν) of hunger and thirst’.¹⁷⁷

This series of rather puzzling analogies concludes by repeating its most important message: ‘The characteristics of seercraft and of human nature are these: for those who know, always rightly interpreted; for those who know not, sometimes rightly and sometimes not.’¹⁷⁸ According to this passage, it is inevitable for anyone aspiring to master the art of dietetics, as well as the art of divination, to practice the skill of understanding invisible things and predicting future events on the basis of a correct discernment of the visible signs, which

should be also considered. As reported by Aristophanes (V. 1016–1020) and Plato (*Sph.* 252c), there was a famous prophet Eurykles whose voice came from the bellies of other people. Athenaeus (*Deipnosoph.* 5.187c = Kaibel 5.12.16–17) reports that Epicurus (fr. 57, ed. Usener) posed questions in his *Symposium* about indigestion as a means of obtaining omens (ζητεῖ περὶ δυσπεψίας ὥστ’ οἰωνίσασθαι). Alciphron (4.19.15–16 = Schepers 152.17–18) mentions a woman from Phrygia who had very great experience in gastromancy (γαστρομαντεύεσθαι δεινήν).

174 *Vict.* 1.12 (Joly-Byl 136.12 = L. 6.488), trans. Jones (modified).

175 Supposing that the author explicitly denies mind (γνώμη) to trees (*Vict.* 3.68, Joly-Byl 198.12–13 = L. 6.600) and statues (*Vict.* 1.21, Joly-Byl 140.5–6 = L. 6.494), one can suggest dendromancy or agalmatomancy as appropriate divination techniques that fit the context. It might also be an allusion to the concept of divination which presupposes an unwitting medium through which gods speak, as in Plato’s *Ion*, 534b–d. See also Plato’s *Tim.* 71e.

176 Cf. Heraclitus’ fragments DK 22 B 1 and B 34, where expression ἄξύνετοι refers to people who do not understand an account which is at their disposal.

177 *Vict.* 1.12 (Joly-Byl 136.12–13 = L. 6.488), trans. Jones.

178 *Vict.* 1.12 (Joly-Byl 136.13–14 = L. 6.488), trans. Jones.

are, on their own, always ambiguous.¹⁷⁹ This is the first requirement of the pro-diagnosis the author recommends to his readers. Without proper knowledge of how to interpret signs of approaching disease, the art of dietetics would only be guesswork.

Some further epistemological remarks on this subject are made in chap. 23, where an analogy is drawn between the art of writing and acquiring knowledge through senses. The art of writing (γραμματική) is characterized as follows: 'the putting together of figures, symbols of human voice (σημεῖα φωνῆς ἀνθρωπίνης), a power to recall past events, to set forth what must be done. Through seven figures comes knowledge (ἡ γνῶσις).'¹⁸⁰ As in the previously discussed passages, here the focus is on the fact that men use a certain type of knowledge without realizing it: 'all these things a man performs, both he who knows (ὁ ἐπιστάμενος) letters and he who knows them not (ὁ μὴ ἐπιστάμενος).'¹⁸¹

The fact that there are seven figures, commonly interpreted as the seven vowels of the Greek alphabet,¹⁸² makes a rather vague link with the ways in which a man acquires knowledge, which are also said to be seven in number: 'Through seven figures men acquire perception (ἡ αἴσθησις); there is hearing of sounds, sight for the visible, nostrils for smell, tongue for pleasant or unpleasant tastes, mouth for speech, body for touch, passages outwards and inwards for hot or cold breath.'¹⁸³ On the face of it, this list is rather surprising, especially because the author enumerates among the commonly recognized senses, i.e. sight, hearing, smell, taste and touch, also breathing and, even more unexpectedly, speech.¹⁸⁴ It is most probable that the symbolic value of the number

179 Cf. Heraclitus, DK 22 B 93. Antiphon (Tg, ed. and trans. Pendrick) is reported as saying, when asked what the art of divination (μαντική) is, that it is 'the conjecture of an intelligent man (ἀνθρώπου φρονίμου εἰκασμός).'

180 *Vict.* 1.23 (Joly-Byl 140.17–19 = L. 6.494), trans. Jones.

181 *Vict.* 1.23 (Joly-Byl 140.19–20 = L. 6.494), trans. Jones.

182 Jones 1931, 259 n. 1, Joly 1960, 60, West 1971, 379.

183 *Vict.* 1.23 (Joly-Byl 140.20–22 = L. 6.496), trans. Jones (modified).

184 Cf. *Hebd.* 8 (L. 8.638) where the head is said to have seven life-supporting functions (*auxilium ad vitam*): inhalation, exhalation, sight, hearing, smell, ingestion, and taste. As for the possible dependence of *On Regimen* on this treatise, see West 1971, 379–380 who suggests that the version we find in *On Sevens* seems to be 'either the original or a close relation thereof'. Mansfeld 1971, 105 n. 195 holds, on the contrary, that *On Regimen* was one of the sources of the author of *On Sevens*. See also Aristotle (*DA* 435b19–25, ed. Ross) who mentions among the senses (αἰσθήσεις) the tongue (γλῶττα) as the instrument by which we 'make significant sounds to another [man]'. Although, it should be noted that Ross puts the crucial part of the passage (γλῶτταν δὲ ὅπως σημαίνει τι ἑτέρῳ) in brackets.

seven has to do with this extension,¹⁸⁵ but this cannot be helpful in clarifying why it is specifically breathing and speech which complement the standard five senses.¹⁸⁶ I admit to having no satisfactory answer as to why breathing appears on the list,¹⁸⁷ but a possible explanation is available for speech. The inclusion of speech among the 'senses' suggests that it is not only perception in the narrow sense that is meant here but that the author speaks in general about all channels through which a man acquires understanding. 'Through these', concludes the author, 'men acquire knowledge (γνῶσις).'¹⁸⁸ Hence considering the fact that the readers of the dietetic account are instructed about 'what must be done' by means of a written speech, which is depicted in the first part of this analogy, it makes sense to mention speech among the ways in which one can acquire information and learn things.

4.2 *Carpentry and Human Physiology*

In chap. 16 we read that carpenters, while sawing and boring, 'resemble the nature of man'. Since descriptions of boring and sawing appear already in chap. 6 and 7, I start with the earlier passages. In chap. 6 the author describes how particles contained in food, each of them consisting of a mixture of fire and water, enter the human body and how some of them grow at the expense of the others, some consume nourishment while others provide it: 'Those that take give increase, those that give make diminution.'¹⁸⁹ In order to illustrate the dependence of the recipients of the nourishment on the providers, and the

185 On the Greek tradition concerning number seven see Roscher 1909.

186 Cf. the Hippocratic *On Fleashes* which discusses speech together with *pneuma* in chap. 18 (L. 8.606–608), immediately after accounts of the functions of hearing (chap. 15), smell (chap. 16) and sight (chap. 17).

187 There were several authors in the second half of the fifth century BCE who argued that intelligence depends on or even derives from breath and air (e.g. Democritus, DK 68 A 106; Diogenes of Apollonia, DK 64 B4, B 5 and A 19; *Morb. Sacr.* 16–17, Jouanna 29.4–31.5 = L. 6.390–394), but there is no support for such a conception in *On Regimen*.

188 *Vict.* 1.23 (Joly-Byl 140.22–23 = L. 6.496). As Jouanna 2012, 226 convincingly reveals in his ingenious interpretation of the concept of sensation in *On Regimen*, the account in chap. 35 closely resembles the one in Plato's *Timaeus*: 'Plato's representation of αἰσθήσεις cannot correspond uniquely to that which we call sensation, i.e. the conjunction of a stimulus and of a felt impression, but first of all to a dynamic picture of the αἰσθήσεις which come from the exterior before penetrating to be perceived. The αἰσθήσεις mean here, as in *On Regimen*, above all the 'sensory particles', which will be called in Aristotle's *De anima* αἰσθητά.'

189 *Vict.* 1.6 (130.1–2 = L. 6.478), trans. Jones.

mutuality of the process of giving and receiving, growth and diminution, an analogy with sawing is introduced:

Men saw a log; the one pulls and the other pushes, but herein they do the same thing, and while making less they make more. Such is the nature of man (τοιούτον φύσις ἀνθρώπου). One part pushes, the other pulls; one part gives, the other takes. It gives to this and takes from that, and to one it gives so much the more, while that from which it takes is so much the less.¹⁹⁰

The principle of the cosmic saw, as Peck calls it, is introduced here for the first time, within a discussion of digestion and growth. The movement of a saw, which is pulled in one direction and pushed in the other, oscillating between extreme positions, illustrates the distribution of nourishment between various parts in and of the human body. The phrase ‘while making less they make more’ can be read in the sense that by cutting the wood into pieces they decrease its original size but increase the number of its parts.

In the subsequent chapter, where human nutriment (τροφή ἀνθρώπου)¹⁹¹ is still in focus, the author first briefly describes the motion of the portions or particles of nutriment available in a human organism, ‘some being forced inside, others outside’ (τὰ μὲν ἔσω βιαζομένης, τὰ δὲ ἔξω),¹⁹² and then, towards the end of the chapter, he summarizes it by saying: ‘One part pulls, the other pushes; what is forced inside comes outside; but if violence be applied at the wrong time there is no success (τὸ μὲν ἔλκει, τὸ δὲ ὠθεῖ· ἔσω δὲ βιαζομένου ἔξω ἔρπει· ἣν δὲ βιάται παρὰ καιρόν, παντὸς ἀποτεύξεται).’¹⁹³ As I understand it, the author speaks here about the ingestion of nutriments (τὸ μὲν ἔλκει) and secretion of excrements (τὸ δὲ ὠθεῖ), two different but interdependent activities within the digestion cycle. None of these activities should be forced at the wrong time (παρὰ καιρόν), both ingestion and secretion need due time to undergo their natural intervals, otherwise the natural balance within the digestion cycle might be disturbed (παντὸς ἀποτεύξεται) and health (or even life) threatened.

In the middle of the chapter, sandwiched between the words τὰ μὲν ἔσω βιαζομένης, τὰ δὲ ἔξω and the final summary of the nutritive principles, the author introduces a technical analogy describing two carpenters boring a log:

190 *Vict.* 1.6 (130.2–5 = L. 6.478), trans. Jones.

191 *Vict.* 1.7 (130.27 = L. 6.480).

192 *Vict.* 1.7 (130.24–25 = L. 6.480).

193 *Vict.* 1.7 (130.28–29 = L. 6.480), trans. Jones (modified).

As carpenters saw the log (ὥσπερ οἱ τέκτονες τὸ ξύλον τρυπῶσιν), and one pulls and the other pushes (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ), though they do the same thing. The one that presses below pulls the one above, otherwise the saw could not descend. If force be applied they will lose all. Such is the nutriment of a man (τοιούτον τροφή ἀνθρώπου).¹⁹⁴

There is a difficulty here: ‘boring with an auger seems an impossible action to represent by ἔλκει and ὠθεῖ’, as Jones puts it.¹⁹⁵ Some editors have therefore sought a solution by changing the Greek text,¹⁹⁶ though the problem is interpretative rather than textual and there are at least two plausible ways to read the original text and thus save the manuscript reading. The first solution was suggested by Peck and recorded by Jones in the Appendix to book 1, where, in spite of his doubts about the original reading τρυπῶσιν, he admits that ‘it is quite possible that it is right’. He offers the following solution:

Dr. Peck thinks that a horizontal auger could be worked up and down by a leather thong. But though you can pull a thong you cannot push it. Perhaps there is a reference to the working of an auger by means of a bow,

194 *Vict.* 1.7 (130.25–27 = L. 6.480), trans. Jones.

195 Jones 1931, 296.

196 Although both main manuscripts (M and θ) read ὥσπερ οἱ τέκτονες τὸ ξύλον τρυπῶσιν, most editors replace the verb τρυπῶσιν with either πρίζουσιν (Jones 1931, 242, Joly 1967, 9, Joly-Byl 2003, 130) or πρίουσιν (Littré 1839–1861, 6.480, Fredrich 1899, 114): in both cases the activity of the carpenters is deliberately changed from ‘boring’ to ‘sawing’. As to the first alternative, the only textual evidence in support of reading πρίζουσιν is to be found in manuscript θ, where a second hand has written πρίζουσιν over τρυπῶσιν. As to the plausibility of this correction, three points should be considered. First, the verb πρίζω, a later form of πρίω, occurs—as far as I know—in no other genuine Greek text from the Classical era and therefore it appears to be anachronistic in our treatise. Second, the occurrence of πρίουσιν in a similar passage in ch. 6 (πρίουσιν ἀνθρώποι ξύλον· ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ, τὸ δ’ αὐτὸ τοῦτο ποιεῖουσιν· μείον δὲ ποιέοντες πλέον ποιεῖουσιν (*Vict.* 1.6, Joly-Byl 130.2–3 = L. 6.478)) certainly makes τρυπῶσιν in ch. 7 the *lectio difficilior*, which, together with the agreement of the manuscripts and the non-attestation of the form πρίζω in the Classical period, makes it the *lectio potior*. And third, the manuscript θ dating back to the tenth or eleventh century CE bears evident traces of other deliberate alterations, for instance changing the plural θεοί into singular θεός as well as correcting all suffixes implying the plurality of gods, and obliterating all names of Greek gods mentioned in book 4 (cf. Joly-Byl 2003, 52 n. 6). Though it is not clear whether the corrector of πρίζουσιν over τρυπῶσιν is identical with the Christian censor or not, these evidently posterior corrections should not be taken as the authority for changing the text in modern editions aiming at a trustworthy reconstruction of the original wording of the ancient text.

the string of which was twisted round the top of the auger, and then the bow was worked just as a saw.¹⁹⁷

Jones' suggestion of a bow drill is sufficient for saving the manuscript reading. Such a tool was commonly used in ancient times for drilling holes into stones, bones, teeth or other hard materials, and sometimes also for boring wood.¹⁹⁸ A longer bow could conceivably have been used with two handicraftsmen pushing and pulling the bow at the same time (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ, τῷτὸ ποιέοντες) and the main interpretative objection can thus be dismissed.

But since this interpretation is also not without its difficulties,¹⁹⁹ I suggest an alternative explanation. We can imagine an auger similar in shape to a corkscrew, consisting of a long metallic shaft and a large cross handle at the top at right angles to it, enabling the craftsman to apply both his hands with a considerable leverage. After rotating the auger 180 degrees around its axis the craftsman would have to release the handle and move each hand to the opposite side before continuing to turn it. In turning round the shaft, its helical cutting edge turns out the chips of wood in spiral pieces and pulls them out of the hole. Where necessary, such an instrument could be operated by two men standing on either side of the auger and each grasping both sides of the handle. Both carpenters will pull and push the auger handle at the same time (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ, τῷτὸ ποιέοντες), with one pulling and the other pushing

197 Jones 1931, 296.

198 For the technical details, terminology and archaeological evidence concerning ancient drills and augers see Blümner 1879, 222–226 and Smith 1890, s.v. *terebra*.

199 The main difficulty of Peck's interpretation is that a drill driven by a bow rotates in both directions and therefore its effect depends mainly on downward pressure and speed of the drill, which crushes the material into dust rather than carving it. Moreover, the friction of the drill generates heat and causes wood to ignite and burn. Such technology can be effective only for making relatively small holes, whereas for making bigger holes (which seems to be implied by the reference to two carpenters moving the same instrument) a helical auger would be a much more effective tool. According to the depicted analogy we need two carpenters using the same instrument, but the second assistant doing the same thing as the first one (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ, τῷτὸ ποιέοντες) cannot substantially increase the effectiveness of the bow boring: the drill rotates in both directions according to the pushing and pulling of the bow and its effect depends mainly on downward pressure and speed of the drill, not on its torsional force, as in the case of a helical auger I am suggesting. The difference between the two boring techniques is attested by Pliny (*Nat.* 17.116) as well as Columella (4.29.15–16): *terebra gallica* (our helical auger) produce shavings, whereas *terebra antiqua* (as for example the bow drill) produce dust and generate heat.

on the one side of the handle, and likewise on the other side.²⁰⁰ The action of boring into the log (downwards) is counterbalanced by pulling the sawdust out of the log (upwards) and therefore fits well with the description κάτω δὲ πιεζόντων ἄνω ἔρπει.²⁰¹

We can now proceed to chap. 16, which reads as follows:

When carpenters saw, one pushes and the other pulls (ὁ μὲν ὠθεῖ, ὁ δὲ ἔλκει), both doing the same thing (τὸ αὐτὸ ποιοῦντες ἀμφοτέροι). When boring, one pulls and the other pushes (τρυπῶσιν, ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ). When they press the tool, this goes up, that goes down (πιεζόντων ἄνω ἔρπει, τὸ δὲ κάτω). When they diminish they increase (μείω ποιοῦντες πλείω ποιοῦσι). They resemble the nature of man (φύσιν ἀνθρώπου μιμέονται). This draws breath in, that expels it (τὸ πνεῦμα τὸ μὲν ἔλκει, τὸ δὲ ὠθεῖ); in both cases the same thing is done. Some parts are pressed down, some come up. From one soul (ἀπὸ μιῆς ψυχῆς) when divided come more and less, greater and smaller (πλείους καὶ μείους καὶ μέζονες καὶ ἐλάσσονες).²⁰²

The same interpretative difficulty as in chap. 7 has led some editors to seclude the words ‘when boring, one pulls and the other pushes’.²⁰³ But if we are able

200 My interpretation may invite an objection that the two men operating the auger would thus both be pushing or pulling at the same time, rather than ‘one pushing, the other pulling (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ)’. Let me suggest that we envisage the following situation: man A is grasping one side of the handle (H¹) with his left hand and pushes, man B (standing opposite to man A, having the auger between them) is grasping the same side of the handle (H¹) with his right hand and pulls (ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ). At the same time man A is grasping the opposite side of the handle (H²) with his right hand and pulls, man B uses his left hand to grasp the same side of the handle (H²) and pushes. Accordingly, it is true that the text describes only one side of the handle and does not explicitly mention that the same happens simultaneously but contrariwise on the other side of the handle, but I do not find this inconvenience to be a crucial objection to my interpretation.

201 *Vict.* 1.7 (Joly-Byl 130.26 = L. 480).

202 *Vict.* 1.16 (Joly-Byl 138.3–8 = L. 6.490), trans. Jones (modified). Cf. Plato, *Tim.* 79b–e describing the process of respiration like a wheel.

203 Whilst Littré accepts the sentence τρυπῶσιν, ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ without difficulties, later editors tend to question the manuscript reading and seclude the sentence from the text. Fredrich 1899, 118 bracketed the whole sentence (τρυπῶσιν, ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ) and later editors followed him (Jones 1930, 254, Joly 1967, 15, Joly-Byl 2003, 138). Jones at least leaves the sentence in his translation (‘[When boring, one pulls and the other pushes]’) and by doing so enables his English readers to make their own judgement about the passage (Jones 1931, 255), but Joly completely omits it in his French translation with a rather exaggerated and unspecific remark (Joly 1967, 15 n. 3), or—even worse—without

to defend the manuscript reading in chap. 7 by introducing an acceptable illustration of boring by pulling and pushing, we can certainly do the same in chap. 16. Nevertheless, there is a further difficulty with our passage, since the analogies of sawing and boring are discussed here in an extremely condensed manner, and it is not, therefore, surprising that some interpreters find the whole passage corrupt and unreadable without conjectures.²⁰⁴ In my opinion, the passage is readable as consistent with the corresponding passages in chs. 6 and 7, where the craft activities are presented separately, each in its own context. With these passages in mind, we can legitimately relate the words ‘when they diminish they increase’ (μείω ποιέοντες πλείω ποιέουσι) to the activity of sawing (as in chap. 6) and ‘when they press the tool, this goes up, that goes down’ (πιεζόντων ἄνω ἔρπει, τὸ δὲ κάτω) to auger boring (as in ch. 7). Both activities illustrate a specific aspect of human nature (φύσιν ἀνθρώπου μιμέονται), and can be understood in the following way.

The first aspect of human nature represents breathing as a cycle consisting of two opposed phases, inhalation and exhalation (τὸ πνεῦμα τὸ μὲν ἔλκει, τὸ δὲ ὠθεῖ· τὼτὸ ποιεῖ καὶ ἀμφοτέρως), illustrated by the activity of boring (τὼτὸ ποιέοντες ἀμφοτέροι· τρυπῶσιν, ὁ μὲν ἔλκει, ὁ δὲ ὠθεῖ . . . πιεζόντων ἄνω ἔρπει, τὸ δὲ κάτω).²⁰⁵ The remaining words τὼτὸ ποιέοντες ἀμφοτέροι may apply (probably intentionally) to both craft activities: sawing (as in chap. 6: τὸ δ’ αὐτὸ τοῦτο ποιέουσι) as well as boring (as in chap. 7: τὼτὸ ποιέοντες).

The second aspect concerns dissemination, namely the division of sperm into greater and smaller pieces.²⁰⁶ In the light of chapters 6–9, where the growth and development of seeds has been discussed, we can render the last sentence in ch. 16 as a continuation of the same discussion of reproduction.²⁰⁷

any explanation at all, as in the CMG edition where we find only a laconic note in the apparatus criticus saying ‘τρυπῶσιν—ὠθεῖ secl. Fredr.’ (Joly-Byl 2003, 138).

204 Cf. Joly 1967, 15 n. 3: ‘Tout ce passage est fort malmene dans la tradition manuscrite; l’etablissement du texte reste forcement conjectural’.

205 Cf. the Hippocratic *On Sacred Disease* (*Morb. Sacr.* 4, Jouanna 12.14–16 = L. 6.368): Οὐ γὰρ οἶόν τε τὸ πνεῦμα στήναι, ἀλλὰ χωρεῖν ἄνω τε καὶ κάτω.

206 Cf. Joly 1960, 77 and Joly 1967, 20 n. 2.

207 At the beginning of chap. 8 we read that human seeds, both female and male, keep the same position until they have no sufficient room ‘for the greatest possible extension’, they cease to draw nourishment and ‘pass into a larger space (ἐς τὴν μέζονα χώραν), driven along in the same manner by force and necessity’ (*Vict.* 1.8, Joly-Byl 132.2–4 = L. 6.482). Supposing that these words describe the process of ejaculation and that the following text in chap. 8 and 9 speaks about the process of conception and formation of the human embryo, we can understand the last words in chap. 16 (*Vict.* 1.16, Joly-Byl 138.7–8 = L. 6.490: ἀπὸ μῆς ψυχῆς διαιρεομένης πλείους καὶ μείους καὶ μέζονες καὶ ἐλάσσονες) as a remark

The analogy of a log sawn by carpenters into many pieces (μείω ποιέοντες πλείω ποίουσι) illustrates the physiological process of dissemination, namely the fact that the decreasing amount of originally homogeneous sperm is counterbalanced by the increasing number and diversity of its disseminated parts (ἀπὸ μιῆς ψυχῆς διαιρεομένης πλείους καὶ μείους καὶ μέζονες καὶ ἐλάσσονες).²⁰⁸

4.3 *Harmony in Embryology, Music and Cooking*

In chap. 18 we find another particularly complicated *phusis-technē* analogy that deserves closer attention, especially because the analogy between musical and culinary compositions exploits another prominent philosophical notion, the concept of harmony, which brings together the Pythagorean and Heraclitean tradition. Already in chap. 8 the author suggests that achieving harmony within the concoction of male and female seeds is a prerequisite for the successful development of a human embryo. This earlier passage reads:

When it has moved to a different place, if it attains correct *harmonia* containing three concords, *syllabē*, *dīoxeōn* and *dia pasōn*, it lives and grows using the same nourishments as before. But if it does not attain *harmonia*, and the low-pitched elements do not become concordant with the high-pitched in the first concord or the second or that which runs through all (*dia pantos*), if just one of them is faulty the whole tuning is useless, as there can be no consonance. But they change from the greater to the less in an untimely fashion, because they do not know what they do.²⁰⁹

The last sentence describes what happens when the harmony is not achieved. In such a case the embryos change ‘from the greater to the less’, i.e. they become small and invisible, or—as one could say—they come from the light of Zeus into the darkness of Hades. All living and mortal organisms undergo such a change, sooner or later, as they ‘fulfil their allotted destiny’ (τὴν πεπρωμένην μοῖραν ἕκαστον ἐκπληροῖ).²¹⁰ But in the present case this happens to the

commenting about what happens with the seeds during ejaculation. Moreover, the author illustrates it by the same craft analogy as he employed in chap. 6, where his discussion on the development of seeds originated.

208 A more comprehensive interpretation of the notion of soul and seed in the treatise will be given in chap. 3 (p. 207–212).

209 *Vict.* 1.8 (Joly-Byl 132.6–11 = L. 6.482), trans. Barker 2007, 280 (modified).

210 *Vict.* 1.5 (Joly-Byl 128.20–21 = L. 6.478).

embryos ‘in an untimely fashion’ or ‘before their destiny’ (πρὸ μοίρης).²¹¹ The reason for this is that they are ignorant of what they do (διότι οὐ γινώσκουσιν, ὅ τι ποιέουσιν),²¹² which implies that there is some degree of consciousness and goal-directedness (and accordingly the possibility of its failure) in each part of a living body (πάντα . . . γνώμην ἔχοντα, ἀγνώμονα)²¹³ from an early stage of embryonic development, and possibly even earlier. Along the same lines, fully mature adults also often don’t know what they do when they imitate nature in the arts they practice (γινώσκοντας ἃ ποιέουσι, καὶ οὐ γινώσκοντας ἃ μιμούνται).²¹⁴ In view of this, our passage seems to imply a capacity to harmonize with the other parts of the organic whole and also to reflect upon it, that is inherent in every part of the body at various stages of its development.

As for the musical terminology used in this passage, it should be recognized that the harmonic intervals are not mentioned here in any mathematical ratio, as one would expect in a Pythagorean account,²¹⁵ but rather in a manner appropriate to the practice of making music.²¹⁶ As A. Barker suggests, the expressions *syllabē*, *d’oxeōn* and *dia pasōn* refer to the way in which one can produce intervals on a particular stringed instrument rather than to any mathematical proportions.²¹⁷ For the following interpretation it is also important to realize

211 *Vict.* 1.8 (Joly-Byl 132.10–11 L. 6.482), trans. Jones. In the preceding chapter (*Vict.* 1.7 = Joly-Byl 130.27–29 = L. 6.480) the author suggested that concerning ‘human nutrition’ (τροφὴ ἀνθρώπου), whatever happens at a wrong time and occasion (παρὰ καιρόν) results in failure (παντὸς ἀποτεύξεται).

212 *Vict.* 1.8 (Joly-Byl 132.11 = L. 6.482).

213 *Vict.* 1.11 (Joly-Byl 134.24–25 = L. 6.486).

214 *Vict.* 1.11 (Joly-Byl 134.23–24 = L. 6.486).

215 The musical terminology has a close parallel in Philolaus (DK 44 B 6) and Huffman 1993, 152 therefore suggests that *On Regimen* draws on Philolaus. Supposing that Burkert 1972, 390 is right when claiming that this passage is ‘obviously Pythagorean’, it implies that the Pythagorean concept of harmony did not necessarily depend on mathematical ratios.

216 In this sense the copyist’s remark preserved in the manuscripts at the beginning of chap. 18 (*Vict.* 1.18, Joly-Byl 138.14 = L. 6.492, trans. Jones: ‘first there must be an instrument of music, whereby to set forth what is intended’) would be more appropriate at this place. Cf. Demont 2014, 17, who believes that ‘the author has an excellent command of music’ and argues in favour of the authenticity of this remark.

217 Cf. Barker 2007, 22: ‘What we call the perfect fourth, for instance, was called *syllabē*, ‘grasp’, or *dia tessarōn*, ‘through four [strings]’ . . . Neither tells us, in any relevant sense, ‘how big’ the interval is. The terms for the perfect fifth and for the octave are no more helpful. The former is *d’oxeōn*, ‘through the high [strings]’, or *dia pente*, ‘through five’; the octave is *harmonia* (‘attunement’, indicating that the normal compass of an attunement was an octave), or *dia pasōn*, ‘through all’. None of this terminology has anything to do with the measurement of the relations between the pitches of notes standing, as we

that harmony in the embryological development was achieved by fire ‘according to nature’ (κατὰ φύσιν).²¹⁸ Harmony is a natural principle, which underlies not only the development of the human body, but also musical arrangements and culinary compositions, as we read in the following analogy in chap. 18:

From the same components come harmonious compositions (ἁρμονίης συντάξεις) that are not the same, from the high and from the low (ἐκ τοῦ ὀξέος καὶ ἐκ τοῦ βαρέος), which are alike in name but not alike in sound. Those that are most diverse make the best harmony (τὰ δὲ ἐλάχιστον διάφορα ἥκιστα συμφέρει);²¹⁹ those that are least diverse make the worst. If anyone composed a piece all on one [component], it would fail to please. It is the greatest changes and the most varied that please the most. Cooks prepare for men dishes of ingredients that disagree while agreeing, mixing together things of all sorts, from things that are the same, things that are not the same, to be food and drink for man. If the cook makes all alike there is no pleasure in them (εἰ δὲ ὅμοια πάντα ποιήσει τις, οὐκέτι τέρψις); and it would not be right either if he were to compound all things in one dish.²²⁰

It is not entirely clear whether the first sentence speaks about harmonious arrangements as they appear both in cooking as well as in musical arrangements, or whether it refers specifically to music. I suggest that the second option is more probable, since it makes the structure of this part of the analogy satisfactorily symmetrical (and similar in its structure to the analogies in chaps. 17 and 21 mentioned above), and also because it seems to be supported by the expressions ἐκ τοῦ ὀξέος καὶ ἐκ τοῦ βαρέος. Nevertheless, in both cooking and making music harmonic structures are achieved by skilful combinations of different (and in a way opposite) components or ingredients. The recipients of these compositions are pleased by the variety rather than uniformity (εἰ δὲ ὅμοια πάντα ποιήσει τις, οὐκέτι τέρψις), and the more variety there is, the more pleasure there is (τὰ δὲ ἐλάχιστον διάφορα ἥκιστα συμφέρει), and vice versa. The analogy then continues as follows:

might put it, a fourth, a fifth or an octave ‘apart’ from one another.’ For similar terminology, see also pseudo-Aristotle (*Pr.* 920a14–27).

218 *Vict.* 1.9 (Joly-Byl 132.22 = L. 6.484).

219 Cf. Heraclitus, DK 22 B 8: ἐκ τῶν διαφερόντων καλλίστην ἁρμονίαν.

220 *Vict.* 1.18 (Joly-Byl 138.15–21 = L. 6.492), trans. Jones (significantly modified).

The notes struck while playing music are some high, some low. The tongue (γλῶσσα) resembles music in distinguishing (μουσικὴν μιμεῖται διαγινώσκουσα), of the things that touch it, the sweet and the acid, the discordant from the concordant. Its notes are struck high and low, and it is well neither when the high notes are struck low nor when the low are struck high. When the tongue (γλῶσσα)²²¹ is well in tune the concord pleases, but there is pain when the tongue is out of tune.²²²

The structure of this analogy as a whole has often been thought to be problematic. H. Diller was disturbed by the fact that the author speaks about two different arts or crafts and that it is not clear which of the two should be the imitating one and which the imitated. The author is therefore, as Diller claims, ‘not sure with his own conception’. Instead of being consistent with his own conception, he provides in this passage a mere juxtaposition.²²³ Nor was H. von Koller happy with the passage, suggesting that we should expect to read here that ‘music imitates the tongue’ (γλῶσσαν μουσική μιμεῖται). The problem for both these interpreters evidently rests upon their presupposition that according to the main thesis the arts and crafts ‘imitate’ human nature, and since the tongue is a natural organ and music an art, music cannot ‘imitate’ the tongue. Accordingly, the claim runs, there must be something wrong with the text.²²⁴ But we have already seen that the main thesis of the *phusis-technē* analogies is that ‘arts are like (ὁμοίας ἐούσας) the affections of man’, and that ‘all the arts have something in common (ἐπικοινωνέουσιν) with the nature of man’, but definitely not that arts ‘imitate’ human nature in the Platonic sense. Following Burkert’s suggestion, there is no need to be concerned with the priority of one side of the

221 Cf. Demont 2014, 19, who suggests an alternative reading: γλῶσσα in this second occurrence means the reed of an aulos and that the author ‘compares two organa, one technical, the reed, and one physiological, the tongue (which could of course also be used in music as a technical means for the voice).’

222 *Vict.* 1.18 (Joly-Byl 138.21–26 = L. 6.492), trans. Jones (modified).

223 Diller 1959, 53: ‘Es handelt sich also in beiden Fällen um Künste, die am Menschen ausgeübt werden, und man fragt sich, welche die nachahmende und welche die nachgeahmte sein soll. Der Verfasser, der dies sonst durch Ausdrücke wie μιμεῖται oder τὰντὰ πάσχει klarstellt, begnügt sich hier mit einer bloßen Nebeneinanderstellung, so daß man schließen könnte, daß er vielleicht selbst seiner Konzeption nicht sicher war.’

224 The argument of von Koller unfortunately convinced R. Joly to change the Greek text from γλῶσσα μουσικὴν μιμεῖται διαγινώσκουσα (as it is attested by manuscript θ) to γλῶσσαν μουσική μιμεῖται διαγινώσκουσαν, which has no manuscript support, but solves the interpretative difficulty expressed by Diller and von Koller.

analogy over the other.²²⁵ And there is, accordingly, no need to be troubled by the fact that two arts are compared to each other, since the analogy with *phusis* (i.e. principles of harmony) is present in both *technai*, and a similar procedure where more than one *technē* serves as an illustration of some aspect of *phusis* is used in other analogies as well, as for instance in chaps. 15, 19, 20 or 24.

4.4 *The Circularity of Physiological Processes*

It was not unusual among ancient Greek philosophers and medical authors to describe the regularity and periodicity of physiological processes as well as the interrelation of all bodily parts as being of a circular nature²²⁶ and this approach is followed by our author in chapters 19 and 22. In chap. 19 we read first about curriers, who ‘stretch, rub, comb and wash’ leather, and the care of children (παιδίων θεραπέιη) who are tended ‘in the same way (ταύτά)’.²²⁷ The author then draws an analogy between basket-makers, who ‘turn the baskets round as they plait them’, and ‘the circuit in the body’, which is again supposed to be ‘the same (τὸ αὐτό)’. As the basket-makers ‘end at the place from which they begin’, so the circuit (περίοδος) in the body ‘ends where it begins’.²²⁸ The emphasis placed on the notion of circularity is evident in these examples, although it is difficult to decide whether the periodicity of physiological processes in general is alluded here, or, rather, some specific circular structure or structures in the body, such as the circle of soul in chap. 35, or the three circuits mentioned in chap. 9 and chap. 10.

The author is more specific in chap. 22 where he focuses on the process of procreation. The fact that men and animals, in the same periods (‘in one and the same revolution’), by the same organs (‘with the same tools’, τοῖσιν αὐτοῖσιν ὀργάνοις)²²⁹ and from the same nutrition (‘from the same materials’), produce various individuals (‘without two being alike’)²³⁰ is illustrated by the

225 Oddly enough, Joly and Byl 2003, 29 n. 8 refer to the same passage in Burkert, which I have quoted and discussed above, without taking his suggestions into consideration.

226 Heraclitus’ fragment DK 22 B 103 (Ξυνὸν γὰρ ἀρχὴ καὶ πέρας ἐπὶ κύκλου περιφερείας) and Alcmaeon’s DK 24 B 2 (τοὺς ἀνθρώπους φησὶν Ἀ. διὰ τοῦτο ἀπόλλυσθαι, ὅτι οὐ δύνανται τὴν ἀρχὴν τῷ τέλει προσάψαι) can be read along these lines, although in Hippocratic writings we find more explicit examples, such as in *Alim.* 9 (Joly 141.7–8 = L. 9.102), *Oss.* 11 (L. 9.182), or *Loc. Hom.* 1.1 (Craik 36.1–8 = L. 6.276).

227 *Vict.* 1.19 (138.27–28 = L. 6.492), trans. Jones.

228 *Vict.* 1.19 (138.28–29 = L. 6.492–494), trans. Jones.

229 Cf. Lefèvre 1972, 210–211 and Demont 2014, who provides a convincing argument for taking ὄργανα as organs in this passage.

230 Cf. *Vict.* 1.4 (126.23–25 = L. 6.474), trans. Jones (modified), where it is said that fire and water ‘separate off from themselves many forms of many kinds, both of seeds and of animals,

work of potters upon a spinning wheel: ‘On this wheel as it revolves they make pottery of every shape, and no two pieces are alike, though they are made from the same materials and with the same tools’.²³¹ The movement of the wheel, which ‘shifts neither forwards nor backwards, yet moves both ways at once’, is related to the revolution of the whole (τοῦ ὅλου περιφορῇ), which makes the structure rather more complicated. Instead of two there are three related parts in the analogy: the macrocosm (supposing that the words τοῦ ὅλου refer to the revolutions of the celestial bodies), *technē* (pottery) and *phusis* (i.e. the physiological periods of men and animals). The relationship between the *technē* and *phusis* is expressed simply by ταῦτά πάσχουσι, whereas for the relation between the *technē* and macrocosm the author uses mimetic vocabulary, even though the main manuscripts differ and the exact reading is unclear.²³²

4.5 *Digestion and Growth*

The aim of chap. 20 is to show that the arts of cooking and gold-working are alike to the natural process of digestion in using fire moderately to transform certain materials for other purposes. The exemplary symmetry in structure of this analogy deserves full quotation:

Men work on gold, beat it, wash it and melt it. With gentle (μαλακῶ), not strong, fire it is compacted (συνίσταται). When they have wrought it they use it for all [purposes]. So a man beats corn, washes it, grinds it, applies fire and then uses it. With strong fire it is not digested (συνίσταται) in the body, but with gentle (μαλακῶ).²³³

This analogy clearly illustrates the role of fire in digestion, an important assumption underlying the dietetic theory,²³⁴ as well as in the formation of the body during embryonic development, which is discussed especially in chaps. 9–10. There are two crucial aspects of the vital fire illustrated here. First, it is analogical to but not identical with the physical fire used in working on

which are like to one another neither in their appearance nor their power’. As for this variability of forms coming out of one underlying substance, cf. Diogenes of Apollonia DK 64 B 5 who ascribes similar flexibility to air.

²³¹ *Vict.* 1.22 (140.11–16 = L. 6.494), trans. Jones.

²³² The manuscript M reads μιμητῆς περιφερῆς, while θ reads ἀπόμιμα τῆς περιφορῆς, and P translates *circumfertur similitudinem*. Joly with Byl emend it to ἀπομιμείται περιφορῆν.

²³³ *Vict.* 1.20 (140.1–4 = L. 6.494), trans. Jones (modified).

²³⁴ E.g. *Vict.* 2.56 (180.23–25 = L. 6.570), trans. Jones: ‘... raw things cause colic and belching because what ought to be digested by the fire is dealt with by the belly, which is too weak for the substances that enter it.’

gold and in cooking. And second, only a gentle (or soft, *μαλακόν*) fire can serve its purpose, both in the physiological processes and in the technical analogies, and accordingly some moderation of its heating power is necessary (see below, p. 248–249). There are again two different crafts employed in the analogy, both illustrating the same principles. Nevertheless, the example of cooking has a mediating position between the craft technology and human physiology, for on the one hand it uses the same physical fire as that in goldsmithing, whilst on the other hand it works on the material constituents of food out of which each body is built up and sustained, which connects it with the process of digestion.

The analogy in chap. 21, which is also conveniently symmetrical, illustrates the principles of the growth and development of men by the work of statue-makers.²³⁵ The likeness of both processes is expressed in terms of ‘drying the moist and moistening the dry’, ‘taking from that which is in excess and adding to that which is deficient’, and ‘growing from the smallest to the tallest’. The first sentence of the analogy opens with a claim that ‘statue-makers make a *mimēsis* of the body without the soul, as they do not make intelligent things, using water and earth.’ Here, more than in any other of the *phusis-technē* analogies, it is appropriate to translate *mimēsis* as ‘a copy’, since a statue of a man is a kind of imitation of a human body in its appearance (and *only* in the appearance, i.e. without soul, *πλὴν ψυχῆς*). But we should not overlook the fact that the core of this analogy is not the resemblance between the exterior form of the man and the statue but rather between the processes leading to, and procedures involved in, the construction of a statue and the development of a human. It is in this that the identity of the art of sculpture with the things experienced by man (*ταύτὰ πάσχει καὶ ἄνθρωπος*) rests.

4.6 *Dietetics, Medicine, Gymnastics and Cosmetics*

In its typical form (as found in chaps. 16, 17, 21 or 22) the *phusis-technē* analogy compares an art or craft with some specific aspect of human nature. But this is not always the case, as we have already seen for instance in chap. 18. In the following set of analogies we find two or more different *technai* applying the same procedures to artefacts on the one hand, and to men on the other. The value of these analogies rests partly in the fact that certain aspects of human nature can be recognized from the ways the human body is treated in those arts, and partly in the fact that they discuss arts and activities most relevant to the therapeutic goals of the treatise, including dietetics, medicine and gymnastics.

235 *Vict.* 1.21 (Joly-Byl 140.5–10 = L. 6.494), trans. Jones (modified).

Chap. 13 draws an analogy between iron-making and the job of a physical trainer (παιδοτρίβης).²³⁶ In both cases fire is the main agent in the processes described: as craftsmen ‘melt the iron with fire’, so the trainer takes away the nourishment from the body of the exerciser ‘by fire’. An auxiliary agent is air or breath (*pneuma*) which is said to ‘constrain’ (ἀναγκάζοντες) the fire. As a result of these processes both iron and the body are ‘made rare’ (ἄραιόν) and subsequently treated by means of ‘beating and welding’ and ‘striking, massaging and purging’. And finally, water is applied in both cases in order to replenish nourishment and make the bodies strong, which obviously refers to the technique of tempering in the case of iron and, I suppose, eating after exercise in the case of the gymnast.²³⁷

P. Demont rightly suggests that ‘by observing the blacksmith’s technique, and its ability to harden and mould iron, one can understand the way fire, water and breath also change and mould the human body’.²³⁸ However, many aspects of the analogy remain unclear. What is the role of *pneuma* in the processes described? What is the purpose of treating the human body in such a way? How does it fit in with the physiology of breathing, which is never sufficiently explained in the treatise? Whilst these questions cannot be addressed in full here, it will be worth briefly considering a number of related points.

In chap. 32 the healthiest condition of the human body is defined as a well balanced mixture of the rarest fire (πυρὸς τὸ ἀραιότατον) and finest water (ὑδατος δὲ τὸ λεπτότατον), which indicates that ‘rare’ (ἄραιόν) fire is beneficial to health. In the embryological account in chap. 9 we read about fire drawing both food and breath to itself, while the foetus remains rare (ἄραιόν),²³⁹ which (a) confirms that the ‘rare’ quality is a significant and important factor, and (b) indicates that it has to do with the effect of *pneuma*. Supposing that rare (ἄραιόν) fire and the ‘gentle (μαλακόν) fire, not strong’, which is said to be necessary for digestion in chap. 20, are closely related (if not identical), all these passages presuppose some kind of moderation of the fire. And despite the definitions in chap. 3 and 4, according to which water is the only and sufficient

236 *Vict.* 1.13 (Joly-Byl 136.15–20 = L. 6.488), trans. Jones (modified): [Σιδήρου ὄργανα] Τεχνίται τὸν σίδηρον πυρὶ τήκουσι πνεύματι ἀναγκάζοντες τὸ πῦρ. τὴν ὑπάρχουσαν τροφήν ἀφαιρέονται, ἀραιὸν δὲ ποιήσαντες, παίουσι καὶ συνελαύνουσιν· ὑδατος δὲ ἄλλου τροφή ἰσχυρὸς γίνεται. ταῦτά πάσχει ἄνθρωπος ὑπὸ παιδοτρίβειω· τὴν ὑπάρχουσαν τροφήν πυρὶ ἀφαιρεῖται, ὑπὸ πνεύματος ἀναγκαζομένην. ἀραιούμενος κόπτεται, τρίβεται, καθαίρεται· ὑδάτων δὲ ἐπαγωγή ἄλλοθεν ἰσχυρὸς γίνεται.

237 Alternatively, one can also imagine a bath after exercise, although its nutritive effect on the body is much less obvious.

238 Demont 2014, 15–16.

239 *Vict.* 1.9 (Joly-Byl 132.14–16 = L. 6.482).

counterpart of fire, this and many other passages throughout the treatise indicate that *pneuma* can also do this job, namely in two ways: (a) it can either take away²⁴⁰ or provide the nourishing moisture,²⁴¹ and (b) it can also cool fire.²⁴² Both effects, I suggest, make the fire and its nutriment weaker, gentler, and thus more suitable for digestion and other vital processes.

The structure of the analogy in chap. 14 is extremely confusing,²⁴³ for it says nothing explicit about human nature apart from the laconic concluding remark: 'the same happens (ταὐτὰ πάσχει) to a man'. Nevertheless, the technological part of the analogy is sufficiently instructive, and it is clear that it pertains to the works of fullers, who 'trample, strike and pull; by maltreating they make stronger, by cutting off the threads that project, or by weaving them in, they beautify'. It is not obvious whether the fullers are meant to illustrate the physical training mentioned in the previous chapter, as might be inferred from the opening remark 'this (τοῦτο) do also the fullers' and as is suggested by Diller,²⁴⁴ or rather to illustrate hairdressing or cosmetics in general, as the cutting and weaving together and beautifying suggests (cf. the analogy between carriers and the care of children in chap. 19). In any case, this analogy can be understood as one of the numerous exemplifications of the 'concord of opposites', illustrated here by oppositions between maltreating and making stronger, and making less (i.e. diminishing in length and volume by cutting and weaving) and making more (beautiful).

In chap. 15 we find an analogy between three types of activity: the activity of cobblers, the works of nature, and medical therapy. Cobblers are said to 'divide wholes into parts and make the parts wholes; cutting and stitching they make sound what was rotten',²⁴⁵ 'Man too has the same experience (ταὐτὰ πάσχει)', claims the author: 'wholes are divided into parts, and from union of the parts wholes are formed'.²⁴⁶ This most probably alludes to the account starting in

240 E.g. *Vict.* 2.38 (Joly-Byl 160.21–24 = L. 6.532), 2.40 (Joly-Byl 162.26–164.2 = L. 6.536), 2.62 (Joly-Byl 184.22–24 = L. 6.576, and 184.27–31 = L. 6.576–578), 2.63 (Joly-Byl 186.17–19 = L. 6.578–580).

241 E.g. *Vict.* 2.38 (Joly-Byl 160.2–3 = L. 6.530, 160.30–32 = L. 6.530–532, and 160.35–162.1 = L. 6.534).

242 E.g. *Vict.* 2.38 (Joly-Byl 160.2–3 = L. 6.530, and 160.30–32 = L. 6.532–534), 2.62 (Joly-Byl 184.27–31 = L. 6.576–578).

243 *Vict.* 1.14 (Joly-Byl 136.21–23 = L. 6.490), trans. Jones: Καὶ οἱ γναφεῖς τοῦτο διαπρήσσονται· λακτίζουσι, κόπτουσιν, ἔλκουσι, λυμαινόμενοι ἰσχυρότερα ποιέουσι, κείροντες τὰ ὑπερέχοντα καὶ παραπλέκοντες καλλίω ποιέουσι. ταὐτὰ πάσχει ἄνθρωπος.

244 Diller 1959, 52.

245 *Vict.* 1.15 (Joly-Byl 136.24–25 = L. 6.490), trans. Jones.

246 *Vict.* 1.15 (Joly-Byl 136.25–26 = L. 6.490), trans. Jones (modified).

chap. 6, where it is said that human soul and body and all other things 'are set in due order' (διακοσμεῖται) and that into the human body enter 'parts of parts and wholes of wholes'.²⁴⁷ The consequent embryological account in chaps. 6–9 describes how a new organism as a whole is arranged in its parts.

The second part of the cobblers' activities is compared with medical praxis: 'by stitching and cutting, that which is rotten in men is healed by physicians'.²⁴⁸ These procedures suggest that the author speaks mainly of surgery and wound healing techniques, which resemble the art of the cobblers. Then the author turns to activities which fit well with dietetic therapeutics: 'This too is part of the physician's art: to do away with that which causes pain (τὸ λυπέον), and by taking away the cause of this suffering to make sound (ὑγιέα)'.²⁴⁹

It is noteworthy that medicine is associated here with 'taking away what causes suffering' in general, and with surgical procedures in particular, whilst dietetics is illustrated separately in chap. 17. The point of reference for these aspects of medicine is no longer the craft of cobblers but rather the self-sustaining and self-healing capacity of human nature described as follows:

Nature of herself knows (αὐτομάτη ταῦτα ἐπίσταται) how to do these things: she makes one who is sitting stand up (καθήμενον ποιεῖ ἀναστῆναι) and makes one in motion rest (κινεούμενον ποιεῖ ἀναπαύσασθαι). Nature has also other similar features in common with medicine (τὰ ἄλλα τὰ τοιαῦτα ἔχει φύσις ἱητρικῆς).²⁵⁰

Despite some philological difficulties with the text,²⁵¹ I understand this passage as an illustration of the self-moderating capacity of nature with an example of a natural impulse for movement in someone who has rested for too long and for halting and having a rest in someone who is exhausted by movement.

247 *Vict.* 1.6 (Joly-Byl 128.24–25 = L. 6.478), trans. Jones.

248 *Vict.* 1.15 (Joly-Byl 136.26–27 = L. 6.490), trans. Jones.

249 *Vict.* 1.15 (Joly-Byl 136.27–28 = L. 6.490). Cf. *Nat. hom.* 9 (Jouanna 190.7–10 = L. 6.54), trans. Jones: 'This one should learn and change, and carry out treatment only after examination of the patient's constitution, age, physique, the season of the year and the fashion of the disease, sometimes taking away and sometimes adding ...'

250 *Vict.* 1.15 (136.28–138.2 = L. 6.490).

251 The reading καθήμενον ποιεῖ... κινεούμενον ποιεῖ... is Joly's emendation, translated as 'elle fait lever celui qui est assis, se reposer celui qui s'agite'. Mss. M and θ read καθήμενος πονεῖ ἀναστῆναι... κινεούμενος πονεῖ ἀναπαύσασθαι (P: sedens nisi surrexerit fatigatur, et agitatus nisi requieverit dolet), i.e. 'when a man is sitting it is a labour to rise; when he is moving it is a labour to come to rest' (trans. Jones), which does not seem to allow a satisfactory interpretation. For further possible renderings of the passage see Joly-Byl 2003, 246.

Medical help is needed where this natural balance fails to be maintained. In principle, medical therapy proceeds in the same way as nature itself, it heals by 'taking away the cause of suffering'.

On the whole we can say that two aspects of human nature are illustrated in the chapter: the self-organizing capacity ('wholes are divided into parts, and from union of the parts wholes are formed') is illustrated with the activities of cobblers; and the self-healing capacity ('to do away with that which causes pain, and by taking away the cause of suffering to make sound') is compared with the capacity of medical art. The middle term of the analogy ('cutting and stitching they make sound what was rotten') has nothing to do with human nature, at least not directly, but makes a link between the craft and the medical art, and here more specifically surgery, which cures injured or otherwise impaired parts of human body.

I conclude with an analogy illustrating the subject matter of the whole treatise. In chap. 17, which sits approximately in the middle of the *phusis-technē* excursion, we find an analogy between building and human regimen. (It is noteworthy that dietetics appears only after the analogies concerning gymnastic training and medicine have been introduced, which indicates the relatively independent status of this expertise from the previous two.) The interpretation of this passage is facilitated by the fact that the wording is almost identical for *technē* and for *phusis* and that the example of building on the side of *technē* is perfectly symmetrical with that of human diet on the side of *phusis*. Builders are said to 'fashion a harmony out of diverse materials', by means of 'moistening what is dry and drying what is moist' and 'dividing wholes and putting together what is divided'. Then the author says that 'this resembles the regimen of man (δΐαιταν ἀνθρωπίνην μιμέεται)', and the same descriptions are repeated almost exactly.²⁵² As for the 'moistening what is dry and drying what is moist' sentence (which is picked up in another two analogies),²⁵³ it should be remembered that all the dietetic prescriptions presented in *On Regimen* are based on the assumption that various activities and various kinds of food can

252 *Vict.* 1.17 (Joly-Byl 138.9–13 = L. 6.492). Joly with Byl have changed the manuscript wording μιμέεται (θ, M) into plural μιμόνται, probably because they took the builders to be the subject of the verb in the sense that 'the builders imitate human regimen'. But supposing that the verb does not express imitation but rather resemblance or correspondence and that it is not builders but rather their activities that resemble human regimen, I suggest reading the text as it was transmitted by the manuscripts. Moreover, in the preceding and following sentences the author uses only plurals, which makes μιμέεται the *lectio difficilior*. A similar analogy in topic as well as in wording is to be found in chap. 16 (*Vict.* 1.16, Joly-Byl 138.3–8 = 6.490: τέκτονες . . . φύσιν τε ἀνθρώπου μιμόνται).

253 *Vict.* 1.21 (Joly-Byl 140.6 and 10 = L. 6.494), 1.22 (Joly-Byl 140.16 = L. 6.494).

cool or warm or moisten or dry the human body.²⁵⁴ The goal of the suggested dietetic account is to achieve and maintain the equilibrium of moistness, dryness, coldness and hotness in our body by dietetic means.²⁵⁵ All foods, exercises (or activities) and other dietetic constants (gender, specific individual nature) and variables (age, seasons, winds) are catalogued, organized and analysed according to these qualities or according to the capacity to produce these qualities in the human body. The next sentence ('dividing wholes and putting together what is divided')²⁵⁶ reflects the author's assumption that any natural whole (namely animals, including man, and their nutrition, i.e. other animals or plants) should be explained from its parts, and that organic parts naturally incline to unify into wholes. The author has already introduced and used this principle in his methodological preface (chap. 2), where he claimed that knowledge of human nature consists in knowledge and discernment of its primary parts (*merea*), and also in the subsequent analysis of human nature (chap. 3), where these 'parts' are identified as two elements: fire and water.²⁵⁷ The physiological theory underlying the dietetic account can be understood as a kind of methodological 'mereology'. It concerns mainly the relations of parts to whole and the relations of part to part within a whole, as is seen most explicitly in the second sentence of chap. 6: 'Into man enter parts of parts and wholes of wholes, containing a mixture of fire and water ...'²⁵⁸ The last characteristic supporting the analogy between building and human regimen is the common use of the principle of the unity of opposites. This principle appears

254 Cf. *Morb. Sacr.* 18 (Jouanna 32.15–33.2 = L. 6.396), trans. Jones: 'Whoever knows how to cause in men by regimen moist or dry, hot or cold, he can cure this disease also ...'

255 Cf. *Vict.* 1.32 (Joly-Byl 148.25–26 = L. 6.508), trans. Jones: 'Such persons ought to use a regimen that warms and dries, whether it be exercise or food ...'; *Vict.* 1.32 (Joly-Byl 148.32–33 = L. 6.510), trans. Jones: 'Their regimen should consist of such things as dry and cool, both food, drink and exercise ...'; *Vict.* 1.32 (Joly-Byl 150.2–3 = L. 6.510), trans. Jones: 'Regimen should be such as cools and moistens, with such exercises as warm and dissolve least and produce the most thorough cooling ...'; *Vict.* 1.32 (Joly-Byl 150.8 = L. 6.510), trans. Jones: 'Regimen should be such as is warm and at the same time moistens ...'

256 Cf. *Vict.* 1.15 (Joly-Byl 136.24 and 26 = L. 6.490).

257 *Vict.* 1.2 (Joly-Byl 122.22–24 = L. 6.468), trans. Jones: 'I maintain that he who aspires to treat correctly of human regimen must first acquire knowledge and discernment of the nature of man in general—knowledge of its primary parts and discernment of the parts (*merea*) by which it is controlled'; *Vict.* 1.3 (Joly-Byl 126.5–6 = L. 472), trans. Jones (modified): 'Now all animals, including man, are composed of two [parts] ... namely, fire and water'. See also *Vict.* 1.25 (Joly-Byl 142.6–7 = L. 496): 'The soul of man, as I have already said, has a mixture of fire and water—parts of man.'

258 *Vict.* 1.6 (Joly-Byl 128.25–130.1 = L. 6.478), trans. Jones.

at the beginning of the analogy in connection with builders ('out of diverse materials fashion a harmony') and again at the end of the chapter, where it probably covers the activities of the builders as well as the dietetic procedures ('all these, being diverse, are harmonious').

Conclusion

The main objective of this chapter was to put *On Regimen* into the context of cosmological and epistemological speculations of the fifth century BCE and consequently to make the case that the text deserves due attention not only in the history of medicine, but also in the history of philosophy. I have attempted to show that the author not only had a profound knowledge of the philosophical terminology and arguments, but that his original conception of the nature of man was consciously built on some of the most prominent and widely accepted philosophical concepts of his time. I believe, after all, that even those scholars who remain reluctant to put the anonymous Hippocratic author on equal footing with figures traditionally labelled as philosophers, such as Archelaus, Diogenes, or Hippo (not to mention philosophical giants like Heraclitus, Parmenides, Empedocles or Anaxagoras), should admit that there is a lesson to be learnt about early Greek philosophy from this treatise, namely that it can help us in bridging the gap between the fragmentary evidence for earlier thinkers and the numerous and more fully preserved writings of Plato and later philosophers.

My main example has been the concept of *mimēsis* and related topics, such as the notion of the harmonic structure of the cosmos and all living beings, or the idea of the micro-macrocosmic analogy, which were often treated as typically Pythagorean.²⁵⁹ Joly and Byl recognized some essential differences between Plato's version of the concept and the one employed in *On Regimen* (and also in the Hippocratic *On Sevens*).²⁶⁰ Nevertheless their comprehension of the mimetic concept in *On Regimen* unfortunately remained rather Platonic. This shortcoming affected not only their commentary on the Hippocratic treatise, but also, even more regrettably, their reconstruction of the Greek text. Accordingly, I have argued that the concept of *mimēsis* in *On Regimen* does

259 E.g. Olerud 1951, 57, Joly 1960, 45–52, Joly 1967, xix, Joly-Byl 2003, 29.

260 Joly and Byl 2003, 30 suggest that while in the *Timaeus* the resemblance of the nature of man with the cosmic whole is an ideal to be achieved, and therefore they speak about a dynamic conception, in the Hippocratic texts the resemblance is given from the beginning, and therefore it is said to be a static conception.

not presuppose any kind of ontological priority between the two members of the mimetic complex, as attested in Plato's theory of ideas and as was often ascribed to early Pythagoreans. Following the hint of W. Burkert, I made the case that *mimēsis* can represent a two-sided correspondence, which makes it possible to interpret separate things following the same pattern without placing them within an ontological hierarchy. Only after securing such a reading in a text which bears no traces of Platonic influence and, at the same time, discusses some of the most important Pythagorean topics, can one argue with confidence that early Pythagorean could have had a similar conception of *mimēsis*.

Apart from the micro-macrocosmic analogy, employed in the embryological discussions as well as in dream diagnosis, the mimetic principle is used extensively in the *phusis-technē* analogies. The main purpose of these analogies, I have argued, is to illustrate some of the most important but not necessarily self-evident principles essential for the account of human nature which underpins the dietetic theory, such as the 'unity of opposites' pattern, the principle of action and reaction represented by the 'cosmic saw' image, the idea of the circularity of physiological processes, or the mereological approach to the composition and physiology of the human body. Given the fact that the drawing of analogies between *technē* and *phusis*, or between the visible and invisible, was a widespread methodological procedure in the Classical period as well as in later times, I hope that better understanding of how this procedure was applied in *On Regimen* can shed more light on other texts and authors of the time as well.

While in this and the previous chapter I have concentrated on topics relevant especially to pre-Platonic philosophy, in the following two chapters I will shift my focus to issues that are more to the point within the fourth century, where—at least in the standard accounts of the history of philosophy—Plato and Aristotle dominate. I will attempt to substantiate that there as well the evidence of *On Regimen* turns out to be relevant and helpful in reconstructing some of the crucial topics related to Plato's and Aristotle's own conceptions of the nature of man.

Therapy of Body and Soul

Phoebus gave to mortals Asclepius and Plato, the one to save their bodies, the other to save their souls.

(DIOGENES LAERTIUS, *Vitae* 3.45)

Introduction

The conception of soul and its relation to body has had a central place in the philosophical, religious and anthropological discussions from antiquity up to the present day. Studies in the historical background of these conceptions in ancient Greece often start with Plato's dialogues and Aristotle's works, especially his *On the Soul*, the first systematic account of the topic. The term *psuchē* is most often translated into English as 'soul', which is an expression with an extremely wide semantic breadth and a great variability of conceptual connotations. The Greek term *psuchē* has no less an ambiguous meaning and has a long and rich history which extends back far beyond Plato and Aristotle.

In the Homeric epics, the oldest extant Greek literature, *psuchē* signifies for the most part the ghost or shade of a man leaving the corpse (*sōma*) at the moment of death and departing to Hades as soon as the dead body is cremated. The only consequence of this concept for living heroes is the possible risk of losing one's *psuchē*. Where there is no *psuchē*, there is no life. *Psuchē* therefore plays the part of the 'life-principle',¹ and for living heroes it can thus be translated as 'mortal life'.² For the cognitive, conative and affective faculties of man, which I shall call 'psychic' (or 'psychological'), Homer uses various terms,³ but never *psuchē*.⁴ As suggested by B. Snell, the absence of

1 Cf. Homer, *Il.* 21.569 (ed. Allen).

2 Other aspects of life are described by Homer in terms of βίος or αἰών (*Od.* 15.491, ed. von der Mühl; *Il.* 4.478 and 9.415, ed. Allen): βίος typically means 'way of life' and as such is distinct from αἰών as well as ψυχή, while αἰών in the sense of 'lifetime' can sometimes be used as synonym for ψυχή (e.g. *Il.* 5.685), and occasionally αἰών and ψυχή leave a dying man at the same time (*Il.* 16.453; *Od.* 9.523).

3 E.g. θυμός, νόος, φρήν (φρένες), καρδίη, κῆρ, ἦτορ and other 'psychological' words. Cf. Sullivan (1995).

4 Falling into a faint is occasionally described in terms of *psuchē* leaving the body (*Il.* 5.696, ed. Allen: τὸν δ' ἔλιπε ψυχή, *Il.* 22.467: ἀπὸ δὲ ψυχῆν ἐκάπυσσε). But in these cases it is rather

psychological unity in the Homeric heroes may correspond to the absence of a concept of bodily unity. There are many words in the Homeric vocabulary expressing various specific aspects of human corporeality (such as δέμας, ῥέθρα, γυῖα, μέλας, or χροός), but none of them indicates a bodily unity. Snell informs us that Aristarchus, the great Alexandrian scholar, had already noticed that in Homer the word *sōma*, which subsequently came to mean ‘body’, means ‘corpse’ and ‘is never used with reference to a living being’.⁵ Snell concludes that ‘early Greeks did not, either in their language or in the visual arts, grasp the body as a unit’;⁶ and he finds the same perspective in early Greek attitudes to the soul: ‘Homer has no one word to characterise the mind or the soul. Ψυχή, the word for soul in later Greek, has no original connection with the thinking and feeling soul’.⁷ While some important objections to Snell’s argumentation have been formulated,⁸ the idea concerning the analogy of body and soul concepts in Homer remains well-grounded and is still useful. Paying special attention to the body-soul relation when discussing the concept of *psuchē* is, I believe, a legitimate and appropriate approach not only in Homeric studies but in later periods of ancient history as well.⁹ This approach will, therefore, provide one of my methodological guidelines in what follows.

In the textual evidence for the period between Homer and Plato—to set the bounds of the discussion in this chapter—we can find an opposition of *psuchē* and *sōma* in various types of conceptions but these do not always correspond with the typical English sense of the words ‘soul’ and ‘body’. In order to avoid misunderstandings, I shall distinguish the various different forms of what I will call the ‘*psuchē-sōma* opposition’. In Homeric texts, to start with, *psuchē* and *sōma* refer exclusively to afterlife experience, to the eschatological dimension of man. In contrast to the other forms, the Homeric *psuchē* does not denote any psychological features of man, nor does *sōma* identify any features of the living body. The *psuchē* of a living man refers to his mortal life and losing one’s *psuchē* equals losing one’s life. This fact captures the fundamental difference between mortals and immortals: soul is a sign of man’s mortality and,

the threat of losing one’s life that the poet expresses there rather than an identification of *psuchē* with consciousness. What speaks against the latter reading is the fact that it is not *psuchē* that returns to the body as the person comes into life, but rather breath or θυμός (*Il.* 5.697–698 and 22.475).

5 Snell 1953, 5.

6 Snell 1953, 7.

7 Snell 1953, 8. Cf. Dodds 1951, 15: ‘Homeric man has no unified concept of what we call *soul* or *personality*.’

8 See for example Padel 1992, especially chap. 2.

9 Cf. Holmes 2010, 29–37, Renehan 1979.

accordingly, Homeric gods have no *psuchē*. This also implies that Homer does not connect *psuchē* with any kind of 'psychological' faculties: the psychological profile of divine minds is described by the usual Homeric expressions for various aspects of human psychology,¹⁰ but never in terms of *psuchē*.¹¹

A fundamentally different form of the *psuchē-sōma* opposition is attested in Plato's dialogues and differs from the Homeric notion in two ways.¹² In contrast to Homer, Plato's eschatological *psuchē* does not terminate its after-life journey in Hades, but rather comes back after some time and reincarnates into a new body.¹³ Plato often argues for a strongly dualistic conception where soul and body have an extremely unfriendly relation during life, with body being viewed as evil,¹⁴ and the separation of soul from body after death can be understood as a kind of liberation of the soul from its bodily tomb.¹⁵ Besides the theory of transmigration and its consequences, the second main difference in Plato's notion of soul consists in his fully developed concept of *psuchē* as the psychological centre of man. The *sōma* loses its organic unity in the moment of death, whereas *psuchē* is immortal and, in Plato's view, keeps all its psychological faculties even after the death of the body.

The questions raised by these semantic shifts between Homer and Plato have received substantial attention from many scholars. Starting with E. Rohde,¹⁶ the earliest explanations focused on the religious and ethical influences on the general notion of *psuchē*. According to this view, Platonic dualism can be derived from the introduction of ascetic religious values into Greece in

10 E.g. θυμός (*Il.* 15.94, ed. Allen); φρένες (*Il.* 15.194); νόος (*Od.* 24.474, ed. von der Mühll); κῆρ (*Il.* 1.44).

11 Only a few occurrences before the end of the 5th century BCE attest that gods might have *psuchē*, e.g. Pindar (*Pyth.* 3.41, ed. Maehler), Euripides (fr. 431, ed. Nauck), Aristophanes (*Ra.* 1468, ed. Coulon and van Daele).

12 It should be remarked that whenever I speak about Plato's accounts, I always refer to specific dialogues and passages, which I indicate in footnotes. It is not at all my ambition to discuss all the 'varying moods and convictions' (Robinson 1970, 131) of Plato's accounts of the soul in general, it would go far beyond the purposes of this study and beyond my expertise. Accordingly, I take Plato into consideration either when I argue against some reading of *On Regimen* which tends to be obfuscated by Platonic paradigms, such as the dualistic conception presented in *Phaedo*, (I adopt this strategy especially in this chapter), or when some remarkable parallel between Plato and the Hippocratic author can be drawn in favour of the hypothesis that Plato was acquainted with the treatise, as will be the case with the *Timaeus*, as discussed in the next chapter.

13 See Plato, *Phd.* 81e–82b, 113a; *Men.* 81b f.; *R.* 620e f., *Phdr.* 248c–249b; *Tim.* 41e–42d.

14 E.g. Plato, *Phd.* 66b6.

15 Plato, *Cra.* 400C, *Grg.* 493a, *Phd.* 62b, 82e, etc.

16 Rohde 1925.

the centuries after Homer. These religious values were traditionally connected with the cult of Orphism and the mystical speculations of early Pythagoreans.¹⁷ M.P. Nilsson followed the tradition of religious explanations and believed that the Orphics introduced a ‘new conception of the afterlife’, according to which criminals are punished and the righteous live a new life full of joy.¹⁸ He derives this idea from the Greek ‘strong sense of justice’.¹⁹ The second step on the way to a theory of transmigration was a logical one, because—according to Nilsson—the Greeks were ‘born logicians’. ‘For as soon as the belief in the divinity, i.e. the immortality of the soul—for the gods are immortal—arose, the unavoidable consequence was that the soul must exist not only after the death of man but also before he was born... For the Greeks belief in metempsychosis is an outcome of the belief in the divinity, the immortality, of the soul.’²⁰

E.R. Dodds justly criticised Nilsson’s presupposition of the exclusively logical nature of the Greek mind and pointed to the existence of two incommensurable notions of the soul in the 5th century BCE, a fact omitted in Nilsson’s treatment.²¹ The first of these notions speaks about an immortal ‘occult’ Self, similar to the Homeric eschatological soul, which transmigrates from one incarnation to another. Some call it *psuchē*²² while Pindar speaks about an ‘image of life’ (αἰῶνος εἰδῶλον)²³ and Empedocles about a *daimon* (δαίμων),²⁴ although no pre-Platonic text clearly attests psychological aspects of the transmigrating entity.²⁵ The second notion equates *psuchē* with the empirical personality, with the ‘psychological’ Self being endowed with emotions, rationality, will and other psychic faculties.

17 Long 1948, Burkert 1962, Kalogerakos 1996. See also the discussion in Claus 1981, 1–7.

18 Nilsson 1941, 5–6.

19 Nilsson 1941, 7.

20 Nilsson 1941, 12.

21 Dodds 1951, 150–153. In his later paper Nilsson 1949, 89 speaks already about ‘pluralistic teaching about the soul’ confusing Greek minds.

22 Xenophanes, DK 21 B 7; Ion of Chios, DK 36 B 4; Herodotus, *Hist.* 2.123 (ed. Legrand).

23 Pindar, fr. 131b (ed. Maehler). Homer (*Il.* 23.72, ed. Allen; *Od.* 11.83 and 24.14, ed. von der Mühl) occasionally uses the expression *eidōlon* as a synonym for eschatological *psuchē*.

24 Empedocles, DK 31 B 115.

25 Claus 1981, 4–5 and 115–116 argues against the ‘psychological’ notion of ψυχή in Xenophanes DK 21 B 7, which was traditionally understood as the oldest and most important pre-Platonic testimony for such a conception. Despite Huffman 2009, 34–35, who raised objections against some of his arguments, I still find Claus’ interpretation convincing and appropriate for the discussion.

There is no doubt that Plato reflects certain religious motifs and uses them for his own purposes but this can in no wise explain the development of the psychological notion of soul and the opposition of 'psychological' and 'somatic' aspects of man that preceded and also evidently influenced Plato's own views. It is generally agreed that the crucial contribution to the development of *psuchē* was achieved through the epistemological speculation of pre-Platonic natural philosophy.²⁶ Speculation on *psuchē* was an integral part of the Milesian research into nature,²⁷ and the first psychological notions of *psuchē* were developed in the context of natural philosophy, mainly in Ionia. The 'life-principle' already represented by *psuchē* in Homer was extended to all animals, plants, and all other objects with the characteristic functions of life.²⁸ Soul was viewed as a principle of life and gradually came to be regarded, in its psychological aspects, as a centre of emotions, hopes, character, speech and intellect.²⁹ However, the bare existence of well-developed notions of a 'psychological' soul and organic body in early Ionian philosophy did not lead to any clearly defined conception of the opposition between *psuchē* and *sōma*. In other words, there is no sharp contrast between the psychic and physical dimensions of man attested in early Ionian natural philosophy and the expressions *psuchē* and *sōma* are never used in opposition there.

The aim of this chapter is to investigate the pre-Platonic evidence for the various forms of the *psuchē-sōma* opposition with special regard to *On Regimen* and other Hippocratic treatises. With the help of this evidence I will argue that speculation about human nature and the possibility of taking care of it resulted in two clearly distinguishable forms of the opposition. First, in the medical tradition the opposition between *psuchē* and *sōma* plays a specific heuristic role, which neither presupposes any kind of body-soul dualism³⁰ nor implies the possibility of a cure for the soul without the body. Secondly, in the tradition of philosophical ethics soul is often taken as the subject of a specific therapeutic expertise which can be defined in contrast to the medical care of bodily health. But this perspective does not demand the kind of strong

26 Cf. Reinhardt 1916, Gigon 1945, Snell 1953, Vlastos 1955, Regenbogen 1961, Claus 1981, Kirk-Raven-Schofield 1983.

27 E.g. Thales, DK 11 A 1 and A 3; Anaximander, DK 12 A 29; Anaximenes, DK 13 B2.

28 For Thales even magnet stone has a *psuchē* due to its ability to move metal (DK 11 A 1, A 3, A 22).

29 Anaximenes, DK 13 B 2; Heraclitus DK 22 B 45, B 115, B 118; Diogenes of Apollonia, DK 64 B 3, B 4, B 5.

30 The term 'dualism' is itself rather ambiguous and therefore needs to be clarified (see below, pp. 185–187).

dualism between body and soul championed by Plato, which is an extreme version of this philosophical approach, unprecedented in earlier writers.

The Hippocratic *On Regimen* plays a unique role in this discussion for various reasons. First, out of almost one hundred occurrences of the expression *psuchē* in the *Corpus Hippocraticum*, two thirds are attested in *On Regimen*,³¹ which clearly indicates the prominence of the term in this particular text. Secondly, while the opposition of *psuchē* and *sōma* seems to be used by the other Hippocratic authors as a matter of course without any need for explanation, the author of *On Regimen* introduces a profoundly elaborated account of the body-soul relationship and creates 'a system of some lucidity and explanatory power',³² which is unique not only in the context of the Hippocratic evidence but in all extant pre-Platonic literature. Thirdly, it has been suggested that the author advocates a dualistic conception of body which draws on Orphic and Pythagorean tradition and resembles Plato's account of the soul in the *Phaedo*. Although this is a rather misleading reading of the evidence, as I shall argue in detail later, *On Regimen* does indeed provide a unique piece of evidence from the Classical period which attests a relation between medical dietetics, Plato's accounts of the soul and the Pythagorean tradition. Fourthly, *On Regimen* is one of the most important Hippocratic documents recording the discussion on the division of competences between physicians and medical authors on the one hand, and ethical philosophers on the other. Fifthly and lastly, some of the specific details of the concept of soul elaborated in *On Regimen* have close parallels in Plato's *Timaeus* and in several naturalistic treatises of Aristotle, which suggests a strong historical relation between the two philosophers and the Hippocratic text.

While this last feature of the concept of soul in *On Regimen* will be the main topic of the following chapter, in the present chapter I discuss the first four. The following account falls into two sections. In the first section I provide some examples of approaches to the distinction between physiological and psychological aspects of human nature in the Archaic period. I then focus on the medical, rhetorical and philosophical literature of the fifth and the beginning of the fourth century BCE, which provides evidence of the earliest versions of the non-Homeric *psuchē-sōma* opposition.³³

31 Cf. Gundert 2000, 15 n. 9.

32 Cf. Hankinson 1991, 205–206 (quotation from 205).

33 With few exceptions, I will not discuss the evidence attested in Greek drama, which is abundant and deserving of attention on its own merits. For the use of psychological terminology in Aeschylus, Sophocles and Euripides see Sullivan 1997, 1999 and 2000, and more recently Holmes 2010, 228–274.

Against this background, in the second part of this chapter I focus on *On Regimen*. I attempt to expound its particular accounts of the soul and related topics, and I discuss the place of the treatise in the history of the debate on the nature of man in general, and the possibilities concerning a therapy of the soul in particular.

1 Distinguishing Soul from Body

1.1 Diagnosing Human Nature

The Greeks of the Archaic period were obviously familiar with situations in which a person's bodily constitution appears to be in tune or out of balance with his or her moral, emotional or intellectual character, and they were able to discuss such situations without using the terms *psuchē* or *sōma*. Different aspects of human nature are recognized, for instance, in the first book of the *Iliad* when Agamemnon says that he prefers the daughter of Chryses to Clytemnestra, his wedded wife, 'since she is no whit inferior to her, either in form (δέμας) or in stature (φυήν), or in mind (φρένας), or anywise in handiwork (ἔργα).'³⁴ A skill in handiwork is set side by side with bodily appearance as well as intellect here, providing an illuminating example of the floating boundaries between the properties of body and soul according to this view. Hesiod, when describing the birth of the second, silver generation of men, says: 'It was like the golden race neither in body (φυήν) nor in mind (νόημα).'³⁵ Xenophanes makes a similar distinction when claiming that 'God is one, greatest among gods and men, in no way like mortals either in body (δέμας) or in mind (νόημα).'³⁶ Examples such as these are rare in the Archaic period,³⁷ but this changes during the fifth century.

In the Classical period we can find considerably richer evidence for the opposition of some of the psychological aspects of man to his or her body. Euripides' *Orestes*, to give one example, says to Electra: 'O you that have the spirit (φρένες) of a man, though your body (σῶμα) shows you to be a woman.'³⁸ Whilst various expressions (φρένες, γνώμη, διάνοια, ψυχή, etc.) for the psychological aspects of man are still used, the bodily aspects are expressed with increased frequency by the term *sōma*. In Herodotus, for instance, *sōma* is

34 Homer, *Il.* 1.115 (ed. Allen), trans. Murray.

35 Hesiod, *Erga* 129 (ed. Solmsen), trans. Evelyn-White (modified).

36 Xenophanes, DK 21 B 23, trans. Guthrie 1962, 374.

37 E.g. Homer, *Il.* 3.44–45 (ed. Allen), Archilochus, fr. 114 (ed. West).

38 Euripides, *Or.* 1204–1205 (ed. Diggle), trans. Coleridge (modified).

used for the bodies of humans³⁹ as well as animals,⁴⁰ of the living as well as of the dead.⁴¹ Some expressions (such as φρένες, θυμός or κάρη) are occasionally opposed to *sōma*,⁴² but it is never the case with *psuchē*. Instead of *sōma*, physical strength (ῥώμη) can stand in contrast to *psuchē*.⁴³ We can also note a passage that most probably reflects a specific medical use of the *psuchē-sōma* opposition: Herodotus says about the maddened Cambyses that ‘it is no unlikely thing then that when his body (σῶμα) was grievously afflicted his mind (φρένες) too should be diseased.’⁴⁴ The mind and body are mutually linked in this view, since ‘mind (φρένες) grows together’, as Herodotus mentions few pages later, ‘with the growth of the body (σῶμα)’.⁴⁵ A similar idea is attested in the Hippocratic *Epidemics* 6, where *psuchē* stands for mind (φρένες) in opposition to *sōma*.⁴⁶

This brings us to the Hippocratic treatises, in which it is not unusual to find the physical and psychological aspects of man compared, or even contrasted, with each other, although the vocabulary is far from being standardised across the texts. The general term for the psychological aspect of man can be, for instance, character (ἥθος) or mind (γνώμη) as opposed to physical appearance (εἶδος).⁴⁷ Much more frequent is the expression σῶμα for body in opposition to γνώμη for mind.⁴⁸ For example, the author of *On the Art* asserts that ‘the physician sets about his task with healthy mind (γνώμη) and healthy body (σῶμα)’.⁴⁹ In *Prorrheticon* it is said that ‘one must also take into consideration the inclinations of the person’s mind (γνώμη) and the strength of his body (σῶμα)’.⁵⁰ A few chapters later when describing the possibility of dying in fever from the pain of a wound ‘that was not at all serious’, the author claims that ‘all

39 E.g. Herodotus, *Hist.* 1.31.6, 1.32.42, 1.174.17, 1.212.6 (ed. Legrand).

40 E.g. Herodotus, *Hist.* 2.68.12, 5.9.7 (ed. Legrand).

41 Herodotus, *Hist.* 2.40.7, 2.86.23, 4.73.10 (ed. Legrand).

42 Herodotus, *Hist.* 3.33.5–6, 7.39.6–9, 7.148.17 (ed. Legrand).

43 Herodotus, *Hist.* 7.153.19 (ed. Legrand).

44 Herodotus, *Hist.* 3.33.5–6 (ed. Legrand), trans. Godley.

45 Herodotus, *Hist.* 3.134.12–13 (ed. Legrand): αὐξομένῳ γὰρ τῷ σώματι συναύξονται καὶ αἱ φρένες.

46 *Epid.* 6.5.2 (Manetti-Roselli 106.1–2 = L. 5.314.14–15), trans. Smith: ‘The soul of man grows until death. If the soul be burnt up with a disease it consumes the body (Ἀνθρώπου ψυχὴ φύεται μέχρι θανάτου· ἣν δὲ ἐκπυρωθῇ ἅμα τῇ νόσῳ καὶ ἡ ψυχὴ, τὸ σῶμα φέρεται)’.
47 *Aēr.* 24 (Diller 80.6–7 and 80.12–13 = L. 2.90).

48 E.g. *VM* 10 (Jouanna 130.11 = L. 1.592); *Acut.* (*Sp.*) 14 (Joly 75.7 = L. 2.424; mss. M and V: γνώμης); *Hum.* 2 (L. 5.478.12–13); *Flat.* 1 (Jouanna 103.8–9 = L. 6.90).

49 *De arte* 7 (Jouanna 231.11–12 = L. 6.10), trans. Jones.

50 *Prorrh.* 2.4 (L. 9.14.23–24), trans. Potter.

who have either a feverish body (σῶμα) or a disturbed mind (γνώμη) suffer such things.’⁵¹ According to these considerations he draws the conclusion that ‘the souls (ψυχαί) and the bodies (σώματα) of people differ very greatly, and that these differences have great consequences.’⁵² Unfortunately there is no other occurrence of *psuchē* in the treatise and we can, therefore, only speculate about its specific meaning. We are in the same situation with *Affections*, where the only occurrence of ψυχή appears in the author’s advice to ‘administer both food and drink to patients in accordance with their body (σῶμα) and their soul (ψυχή); for in this way they are helped most.’⁵³

Fuller evidence for the use of the *psuchē-sōma* opposition can be found in *Airs, Waters, Places*, where the influence of climate and culture in Europe and Asia on a man’s bodily appearance (εἶδος) and character (ἦθος) is discussed. A temperate climate in Asia causes well-nourished, very fine and very tall physiques (εἶδεα) differing from one another only a little.⁵⁴ However, the inhabitants of Asia are less warlike and gentler in character than Europeans, because the equable seasons ‘show no violent changes.’⁵⁵ The ideal climate for bodily growth seems to be less favourable for the development of a man’s character, ‘for where the land is rich, soft, and well-watered, and the water is very near surface, so as to be hot in summer and cold in winter . . . there the inhabitants are . . . lazy, and generally cowardly in character (τὴν ψυχὴν καχοί).’⁵⁶ Soul (ψυχή), which is understood here as the seat of courage or cowardice, can be influenced both by natural and socio-cultural phenomena. An explanation for the environmental and climatic influences says:

For there occur no mental (τῆς γνώμης) shocks nor violent physical (τοῦ σώματος) change [sc. in Asia], which are more likely to steel the temper and impart to it a fierce passion than is a monotonous sameness. For it is changes of all things that rouse the spirit (τὴν γνώμην) of man and prevent its stagnation. For these reasons, I think, Asiatics are feeble.⁵⁷

51 *Prorrh.* 2.12 (L. 9.34.9–13), trans. Potter.

52 *Prorrh.* 2.12 (L. 9.34.14–15), trans. Potter (modified).

53 *Aff.* 46 (L. 6.254.17–19), trans. Potter (modified).

54 *Aēr.* 12 (Diller 56.6–7 = L. 2.54).

55 *Aēr.* 16 (Diller 62.2–6 = L. 2.62), trans. Jones.

56 *Aēr.* 24 (Diller 82.1–5 = L. 2.90–92), trans. Jones. The phrase τὴν ψυχὴν καχοί is the opposite of εὐψυχοί, expressing bravery (cf. *Aēr.* 23, Diller 76.20–22 = L. 2.84).

57 *Aēr.* 16 (Diller 62.6–12 = L. 2.62–64), trans. Jones (modified).

When the same argument is reiterated later in the treatise, it already has a slightly different wording. In chap. 19 it is said that ‘neither bodily (σῶμα) nor mental (ψυχή) endurance is possible where the changes are not violent’,⁵⁸ and in chap. 23 we read that ‘variation fosters endurance in both body (σῶμα) and soul (ψυχή)’.⁵⁹ In both passages the expression *psuchē* replaces the spirit or mind (γνώμη) mentioned earlier in the text. This does not necessarily mean that both terms are treated as exactly equivalent, but their semantic affinity in this context seems to be clear.

The endurance of *psuchē* is also mentioned within a discussion on the impact of cultural influences on the human character, when the author writes:

The inhabitants of hollow regions, that are meadowy, stifling, with more hot than cool winds, and where the water used is hot, will be neither tall nor well-made, but inclined to be broad, fleshy, and dark-haired . . . Similar bravery and endurance are not by nature (φύσει) part of their soul (ἐν τῇ ψυχῇ), but the imposition of law (νόμος) can produce them artificially.⁶⁰

The imposition of law or habit (νόμος) is considered as the cultural influence that forms a man’s character independently from natural conditions. Laws, habits and institutions (νόμοι), therefore, ‘contribute a great deal to the formation of courageousness (τὴν εὐψυχίην)’.⁶¹

In the Hippocratic *On Humours* we also find the view that certain psychic dispositions, such as diligence of mind (φιλοπονίη ψυχῆς), come about from habits (ἐκ τῶν ἡθέων). Some predispositions like intemperance (ἀκρασίη) in drink, food, or sleep, or endurance (καρτερίη) in work, pertain to the soul (ψυχῆς), while other conditions are qualified as belonging to bodies (οἷα τὰ σώματα).⁶² Some symptoms, such as abscesses, are said to have two alternative causes: ‘they come from humours or from the wasting of body and soul.’⁶³

To sum up, according to the Hippocratic evidence, marking a difference between a physical body and a ‘psychological’ soul (or some of its aspects, such as intelligence or individual character) was an integral part of the medical diagnosis of the human condition. *Psuchē* can represent man’s character with particular respect to endurance and cowardice, as we have seen in *Airs*,

58 *Aēr.* 19 (Diller 68.14–15 = L. 2.72), trans. Jones.

59 *Aēr.* 23 (Diller 76.23 = L. 2.84), trans. Jones.

60 *Aēr.* 24 (Diller 78.17–23 = L. 2.86–88), trans. Jones.

61 *Aēr.* 23 (Diller 78.8 = L. 2.86), trans. Jones.

62 *Hum.* 9 (L. 5.488.15–490.2).

63 *Hum.* 7 (L. 5.488.7–8), trans. Jones.

Waters, Places, and external stimulants may influence a man's body and soul in different ways. In *Prorrhethicon* we find an implicit connection between *psuchē* and mind (γνώμη), and in *Affections psuchē* seemed to be a psychological counterpart to the body. There are no traces of any religious or eschatological speculations in the Hippocratic texts that can explain the need to distinguish soul from body. It seems that it was rather the therapeutic approach to man (and subsequent anthropological questions) which led to the requirement for a distinction between the psychological and somatic aspects of human nature. These aspects do not always respond to external (natural as well as socio-cultural) influences in the same way, and the difference is intensified in extraordinary situations, such as in illness, being under the unfavourable influence of the seasonal changes, or in dreams.⁶⁴ The psychological and somatic aspects can be distinguished by abstraction, but in fact they are never treated as entirely separable from each other. In all passages where body and soul are expressed in opposition, in all its terminological variations, we can understand them as two aspects of a single, indivisible unity, and therefore we can conclude that there was no substantial difference in the therapeutic methods for healing the body and for healing the soul. With the exception of one single passage in *On Regimen*, which will be discussed in length later, the Hippocratic authors always suggest therapy for a human, a patient and not 'his' or 'her' soul or body.⁶⁵ This is a crucial aspect of the Hippocratic evidence for it was in diagnosis, not in therapy, that the body-soul distinction was applied in the Hippocratic treatises. I will call this the 'diagnostic' version of the *psuchē-sōma* opposition in order to distinguish it from the philosophical approach discussed in the following section, where body and soul demand considerably different kinds of therapy.

1.2 *Therapy of the Soul*

Democritus of Abdera was roughly a contemporary with Hippocrates and Socrates and practically all the Hippocratic texts discussed so far can reasonably be supposed to have been written during his lifetime. According to later testimonies Hippocrates and Democritus knew each other and shared some

64 Cf. *Vict.* 4.86 (Joly-Byl 218.3–13 = L. 6.640).

65 It is worth quoting Gundert 2000, 35 here, who arrives at very similar conclusion: 'In sum, mind and body in the Hippocratic writings, while distinguished empirically by being related to different types of phenomena, are both ultimately accounted for by the same explanatory model: human nature (*phusis*), which embraces the totality of bodily structures, physiological processes, and psychic events.'

common views on human nature, health and disease.⁶⁶ While these stories are probably apocryphal they may reflect a genuine Democritean interest in contemporary medical discussions. Even though all his treatises, including those on dietetics and other medical topics,⁶⁷ are lost, the extant fragments confirm his medical and therapeutic concerns abundantly. We find there that the 'diagnostic' form of the *psuchē-sōma* opposition is taken as a self-evident explanatory device in discussions about human nature, especially with regard to health and illness. The care of a man's health is a typical context for Democritus' accounts of the body-soul relation, as one can see, for instance, in the following fragment:

Sleeping during the day indicates bodily (σῶμα) disturbance or distress of soul (ψυχή) or idleness or lack of education.⁶⁸

An abnormal phenomenon can be thus explained in terms of bodily or psychic disturbances, which is a similar approach to that attested in *Airs, waters, places* or in *On Humours*. Democritus uses the same 'diagnostic' form of the *psuchē-sōma* opposition as his Hippocratic contemporaries, but draws considerably different conclusions regarding the methods of therapy. Unlike the medical authors he clearly distinguishes soul-therapy from the therapy of the body:

Medicine (ἰατρικὴ) heals the diseases of the body (σώματος νόσους), while wisdom (σοφίη) frees the soul (ψυχὴν) from passions (παθῶν).⁶⁹

Democritus takes therapy of the soul and therapy of the body as two alternative (and occasionally even competing, as I shall illustrate shortly) therapeutic approaches and argues compellingly in favour of the therapy of soul:

It is fitting for people to take account (λόγον ποιῆσθαι) of the soul (ψυχῆς) rather than the body (σώματος). For perfection of the soul puts right the

66 According to the fictional correspondence between Democritus and Hippocrates (Democritus DK 68 C 2–6), which was probably not written before the 1st century CE, Hippocrates was once called by the Abderians to cure Democritus, but he came back home convinced that there was a great deal he could learn from Democritus about medicine and human nature.

67 Diogenes Laertius, *Vitae* 9.48, ed. Dorandi: Πρόγνωσις, Περὶ διαίτης ἢ διαιτητικόν, Ἱητρικὴ γνῶμη; Αἰτίαι περὶ ἀκαιριῶν καὶ ἐπικαιριῶν . . .

68 Democritus, DK 68 B 212, trans. Taylor. See also a reflection of that idea in Plato's *Laws* (808b).

69 Democritus, DK 68 B 31, trans. Taylor.

bad state of the dwelling (σκήνος), but strength of the dwelling without thought (λογισμός) does not make the soul any better.⁷⁰

The connection of the soul with the body is analogous to that between a housekeeper and his house. As a house does not care about its housekeeper but care in the other direction is presupposed, so the soul-therapy should be preferred to a therapy of the body. I will call this version of the *psuchē-sōma* opposition 'therapeutic' due to these therapeutic concerns.

The most explicit expression of Democritus' argumentation on behalf of the soul-therapy is to be found in the following fragment:

If the body (σῶμα) brought a suit against it [i.e. the soul] for all the sufferings and ills it had endured throughout its whole life, and one had oneself to judge the case, one would gladly condemn the soul (ψυχή) for having ruined certain features of the body through carelessness and made it soft through drink and brought it to rack and ruin through love of pleasure, just as if a tool or a utensil were in a bad state one would blame the person who used it carelessly.⁷¹

Judged according to who or what is responsible for health, the privileged 'part' of man is his soul (ψυχή). The soul should care for its body in the same way as a user cares and takes responsibility for his tool. Democritus thus introduces an instrumental conception of the relationship between *psuchē* and *sōma*,⁷² which is considerably different from that found in the Hippocratic accounts. Moreover, Democritus would disagree with the author of *Airs, waters, places* in his assessment of the effect of great changes to soul. Whilst for the Hippocratic author disturbances of the soul caused by severe seasonal changes lead in the end to the endurance of the soul, in Democritus great changes disturb man's soul:

For men achieve cheerfulness by moderation in pleasure and by proportion in their life (μετριότητι τέρψιος καὶ βίου συμμετρίῃ);⁷³ excess and deficiency are apt to fluctuate and cause great movements (μεγάλας κινήσεις)

70 Democritus, DK 68 B 187, trans. Taylor. Cf. *Vict.* 4.86 (Joly-Byl 218.8 = L. 6.640) discussed below.

71 Democritus, DK 68 B 159, trans. Taylor.

72 Kahn 1985, 9.

73 Cf. Democritus, DK 68 A 167: τὴν δ' <εὐδαιμονίαν καὶ> εὐθυμίαν καὶ εὐεστώ καὶ ἀρμονίαν, συμμετρίαν τε καὶ ἀταραξίαν καλεῖ...

to the soul. And souls which change over great intervals are neither stable nor cheerful.⁷⁴

In the vein of his medical contemporaries, Democritus speaks about proportion and symmetry, especially when discussing the physiological conditions of soul. According to Theophrastus,⁷⁵ ‘Democritus said about thought (φρονεῖν) that it occurs when the soul is properly balanced (συμμέτρως ἐχούσης τῆς ψυχῆς) after the motion (μετὰ τὴν κίνησιν),’⁷⁶ sc. the motion within the soul produced by sensory stimulation. Thought depends on certain symmetry, which changes ‘when one gets too hot or too cold (περίθερμός τις ἢ περίψυχρος γένηται)’. Democritus explains thought ‘by the constitution of the body, which is perhaps consistent on his part, since he makes the soul out to be a body’. Theophrastus also adds that ‘these and similar opinions of his about perception and thought are more or less derived from earlier thinkers’, which signifies a commonplace conception rather than Democritus’ original contribution to the debate.

Democritus obviously shares with the medical authors the therapeutic concern aiming at a certain symmetry, though his account also differs in important ways. Where physicians desire health for their patients, Democritus looks for a moderation in the pleasures which reside in soul, for the sake of cheerfulness (εὐθυμία)⁷⁷ or blessedness (εὐδαιμονία).⁷⁸ Cheerfulness and blessedness are virtually independent from external factors. A mere change in a man’s attitude to his desires can heal him from his sufferings, without the need to change his diet, take extra exercise, visit baths or apply any other standard dietetic procedures. However, a mind in an appropriate state can also secure the health of body.⁷⁹

74 Democritus, DK 68 B 191: ἀνθρώποισι γὰρ εὐθυμία γίνεται μετρίοτητι τέρψιος καὶ βίου συμμετρῇ· τὰ δ’ ἐλλείποντα καὶ ὑπερβάλλοντα μεταπίπτειν τε φιλεῖ καὶ μεγάλας κινήσιας ἐμποιεῖν τῇ ψυχῇ. αἱ δ’ ἐκ μεγάλων διαστημάτων κινούμεναι τῶν ψυχέων οὔτε εὐσταθέες εἰσὶν οὔτε εὐθυμοί.

75 Democritus, DK 68 A 135 (= Theophrastus, *Sens.* 58), trans. Taylor.

76 Diels changes the manuscript reading μετὰ τὴν κίνησιν into κατὰ τὴν κῆρσιν, which allows him to render the passage in the sense that thought comes about according to the balance of the soul’s mixture. No matter how attractive such a reading would be for the sake of comparison with *On Regimen*, it cannot be justified in my opinion.

77 Democritus, DK 68 B 3, B 4, B 191, B 258.

78 Democritus, DK 68 B 170, B 171.

79 Cf. Antiphon, fr. 2 (ed. and trans. Pendrick): ‘... for all human beings the mind leads the body, both in sickness and health, and in all other things’ (πάσι γὰρ ἀνθρώποις ἡ γνώμη τοῦ σώματος ἡγεῖται καὶ εἰς ὑγίειαν καὶ νόσον καὶ εἰς τὰ ἄλλα πάντα).

Whilst this is not the occasion to discuss Democritus' ethics in detail,⁸⁰ it will be necessary to introduce at least the main features of his soul-therapy. As already mentioned, wisdom (σοφία) is suggested as an expertise that provides an alternative to medicine.⁸¹ The good condition of the soul should be preferred to that of the body, for a sound soul can take care of its body, whilst strength of the body 'without thought (ἄνευ λογισμοῦ)' does not make the soul any better.⁸² The expression λογισμός seems to be the key-word for the suggested philosophical therapy of soul, as can also be seen in the following fragment:

Drive out by reasoning (λογισμῶι) distress which is unconquerable if one's soul (ψυχῇ) is torpid.⁸³

The assumption that the soul can be affected by speech and reasoning is one of the most characteristic features of philosophical ethics in general.⁸⁴ Moreover, a similar approach to that found in Democritus was also commonly employed in rhetoric and sophistic literature,⁸⁵ which provides another important body of evidence for the use of the *psychē-sōma* opposition in the 5th century BCE. I have already noted that the opposition between body and soul was introduced in the context of a law-court, albeit a fictional one, in Democritus' fragment B 159. The following evidence seems to suggest that a similar analysis of the relationship between *psychē* and *sōma* was also exploited as an important tool in real lawsuits. Lysias argued, in a defence speech involving the case of a handicapped man, that one must 'heal the body's (τοῦ σώματος) misfortunes with the pursuits of the soul (τῆς ψυχῆς)'.⁸⁶ Antiphon claimed that the endurance of soul can save the body in the case of a false accusation in a trial, for 'when the body (σῶμα) has given up the struggle, its salvation is the soul (ψυχῇ), which

80 For detailed analyses of Democritus' ethics see for example Vlastos 1945 and 1946, McGibbon 1960, Gosling-Taylor 1982, Dudley 1984, Casertano 1984, Kahn 1985, Brancacci-Morel 2007.

81 Democritus, DK 68 B 31.

82 Democritus, DK 68 B 187.

83 Democritus, DK 68 B 290, trans. Taylor.

84 See for instance Plato's *Gorgias* (475d7) where *logos* is compared to a physician, or Isocrates (*De pace*, 39, ed. Mathieu) arguing that for souls that are sick 'there is no other drug but *logos* that will forcefully strike those who are in error'. Cf. Isocrates (*Orat.*, *Ad Demonicum* 1.12.6, eds. Mathieu-Brémond).

85 The difference between rhetoric and sophistry will be deliberately neglected in the following argumentation since it has no relevance for our discussion.

86 Lysias, Ὑπὲρ τοῦ ἀδυνάτου, 3.3–4 (ed. Albini).

is ready to fight on in the knowledge of its innocence.⁸⁷ The opposition of the soul's endurance to that of the body was mentioned in *Airs, waters, places*, and the possibility (or even necessity) of curing the body by means of the soul was also discussed by Democritus. These coincidences strongly suggest that there was a flourishing discussion about the soul-body relation in the second half of the fifth century and that the same or closely related ideas and arguments were employed in considerably different contexts and for different purposes.

This impression is deepened by considering Gorgias' *Encomium of Helen*, which provides the most illuminating piece of evidence for the contemporary sophistic and rhetorical use of the *psuchē-sōma* opposition. There are thirteen references to *psuchē* in the *Encomium* and there can be no doubt that it is perceived by Gorgias as the chief psychological entity in human beings.⁸⁸ In the opening sentence the proper order (κόσμος) of a body is defined by beauty (κάλλος), of a soul by wisdom (σοφία), and of an account (λόγος) by truth (ἀλήθεια).⁸⁹ Soul can be influenced by two principal means: through sense perception, mainly by sight (διὰ τῆς ὀψεως),⁹⁰ and through persuasion (πειθώ) arising from speech (τῷ λόγῳ), which forms the soul 'however it wants' (ὅπως ἐβούλετο).⁹¹ The effect of sensation on soul is used to argue that if Helen's soul was seduced by the sight of Paris' beautiful body, she should not be blamed for following him, for no mortal being can resist the divine power of love.⁹²

She might have also been deceived by a persuasive speech, Gorgias suggests, equating the power of persuasion with the power of drugs:

The power of discourse (τοῦ λόγου δύναμις) stands in the same relation (τὸν αὐτὸν δὲ λόγον ἔχει) to the disposition of soul (πρὸς τὴν τῆς ψυχῆς τάξιν) as the composition of drugs (τῶν φαρμάκων τάξις) does to the nature of bodies (πρὸς τὴν τῶν σωμάτων φύσιν).⁹³

The ambiguity of the nature of *pharmakon* is certainly exploited deliberately here, for it can serve as a remedy when having the right composition and when applied wisely but turns into a poison when wrong composed or wrongly

87 Antiphon, *De caede Herodis*, 93.5–7 (ed. Gernet).

88 Claus 1981, 149.

89 Gorgias, *Hel.* 1 (DK 82 B 11.1).

90 Gorgias, *Hel.* 15 (DK 82 B 11.15).

91 Gorgias, *Hel.* 13 (DK 82 B 11.13).

92 Gorgias, *Hel.* 19 (DK 82 B 11.19).

93 Gorgias, *Hel.* 14 (DK 82 B 11.14), trans. Donovan (modified).

applied. Likewise, the power of *logos* depends on its composition and application, as we read in the following passage:

For just as different drugs (τῶν φαρμάκων) draw off different humors from the body, and some put an end to disease and others to life, so too of discourses (τῶν λόγων): some give pain, others delight, others terrify, others rouse the hearers to courage, and yet others by a certain vile persuasion drug and trick the soul.⁹⁴

As drugs can be effective on the whole body already in a small dosage, also *logos* can by no more than a few words induce immense effects. It is 'a great potentate (δυνάστης μέγας),⁹⁵ which by the smallest and most secret body (ὅς σμικροτάτῳ σώματι καὶ ἀφανεστάτῳ) accomplishes the most divine works; for it can stop fear and pain and produce joy and make mercy abound.'⁹⁶

The analogy between the power of persuasion and that of drugs serves Gorgias as the main argument in favour of Helen's blamelessness. Whatever sensory or mental stimulus convinced the soul of Helen to leave Menelaus and to escape with Paris, she cannot be held responsible. The abdication of moral responsibility, as Claus puts it,⁹⁷ is incompatible with Democritus' and Plato's accounts of the soul, although it goes well with the medical concept of illness, which is, as a rule, free from moral connotations.⁹⁸ However, the *psuchē-sōma* opposition used by Gorgias is closer to the 'therapeutic version' than to the 'diagnostic' form typically used by medical authorities, for it explicitly contrasts techniques for curing the body and those for influencing soul.

After having introduced the ideas of Democritus, Gorgias and other proponents of the 'therapeutic' form of the *psuchē-sōma* opposition, the last figure I would like to discuss briefly in this section is Socrates, a contemporary of Democritus. He was without doubt the most influential Athenian thinker of the second half of the fifth century, although he most probably never wrote

94 Gorgias, *Hel.* 14 (DK 82 B 11.14), trans. Donovan.

95 Cf. *Flat.* 3 (Jouanna 106.2–3 = L 6.94) where air is said to be a μέγιστος δυνάστης. This and other close analogies between Gorgias' *Encomium* and this Hippocratic treatise have been discussed repeatedly (Mass 1887, Blass 1887, 89–91, Norden 1915, 44f.). Jouanna 2012, 50 even draws the conclusion that 'of all the epideictic discourses preserved from the fifth and fourth century, the closest to Gorgias' *Encomium of Helen* is the Hippocratic treatise *Breaths*'.

96 Gorgias, *Hel.* 8 (DK 82 B 11.8), trans. Donovan.

97 Claus 1981, 150.

98 This is not to deny possible exceptions on both sides but rather to contrast two distinct and in a way opposite approaches.

anything, and our picture of him for the most part depends on no more than three authors. Whilst Aristophanes presents Socrates in his *Clouds* as a paradigmatic sophist who misleads and corrupts Athenian youth, Plato uses him as the main speaker in most of his dialogues, including those in which he attacks sophists and rhetoricians, such as the *Protagoras* or *Gorgias*. Plato's Socrates expresses a critical attitude towards dietetics in the *Republic* and advances an extreme dualistic concept of body and soul in *Phaedo*, although considerably different ideas on the same topics are ascribed to the Athenian by Xenophon. In what follows I will focus on Xenophon's portrait of Socrates, which is not necessarily more accurate, from the historical point of view, than the representations provided by Plato or Aristophanes, but attests views on the care of soul and body which are especially important for the present discussion.

In his *Memorabilia* Xenophon writes that Socrates 'schooled his body and soul by following a regimen (διδάτῃ) which, in all human calculation, would give him a life of confidence and security, and would make it easy to meet his expenses'.⁹⁹ He is said to have eaten just enough food 'to make eating a pleasure' and that 'he was so ready for his food that he found appetite the best sauce: and any kind of drink he found pleasant, because he drank only when he was thirsty'.¹⁰⁰ Whenever he accepted an invitation to dinner, he is reported to have 'resisted the common temptation to exceed the limit of satiety' without any difficulty, and he advised others 'to avoid appetizers that encouraged them to eat and drink what they did not want: for such trash was the ruin of stomachs and heads and souls (γαστέρας καὶ κεφαλὰς καὶ ψυχὰς)'.¹⁰¹

His ability to moderate his life according to certain essential dietetic guidelines has nothing to do with asceticism in Xenophon's report. Socrates is reported as saying that 'the term "good feeding" (τὸ εὖωχέσθαι) in Attic was a synonym for "eating" (ἐσθίειν) and that the "good" (εὖ) in the compound implied the eating of food that could harm neither body nor soul and was not hard to come by. Thus he attributed even good feeding to sober livers'.¹⁰²

99 Xenophon, *Mem.* 1.3.5.1–3, ed. and trans. Marchant (modified).

100 Xenophon, *Mem.* 1.3.5.6–10, ed. and trans. Marchant.

101 Xenophon, *Mem.* 1.3.6.1–8, ed. and trans. Marchant (modified). It is noteworthy how Socrates, according to Xenophon (*Mem.* 1.3.7.1–8.2), interprets a Homeric story by means of dietetic reasoning: "I believe," he said in jest, "it was by providing a feast of such things that Circe made swine; and it was partly by the prompting of Hermes, partly through his own self-restraint and avoidance of excessive indulgence in such things, that Odysseus was not turned into a pig." This was how he would talk on the subject, half joking, half in earnest' (trans. Marchant).

102 Xenophon, *Mem.* 3.14.7.1–5, ed. and trans. Marchant.

Xenophon reports that Socrates himself ‘never neglected the body, and reproved such neglect in others’, in contrast to Plato’s Socrates in the *Phaedo*, who advises Simmias and Cebes to abandon the body as far as possible and to have no contact or association with it, for ‘the soul of the philosopher most disdains the body, flees from it and seeks to be by itself (αὐτὴ καθ’ αὐτήν).’¹⁰³ Xenophon’s Socrates disapproved of over-eating followed by over-exertion, but approved of taking as much hard exercise as is ‘agreeable to the soul’; for the habit, as he said, ‘not only insured good health, but did not hamper the care of the soul.’¹⁰⁴ He compared physical training to the discipline necessary for managing one’s soul: ‘as those who do not train the body cannot perform the functions proper to the body, so those who do not train the soul cannot perform the functions of the soul: for they cannot do what they ought to do nor avoid what they ought not to do.’¹⁰⁵ ‘To me indeed it seems’, claims Socrates, ‘that whatever is honourable, whatever is good in conduct is the result of training, and that this is especially true of prudence (σωφροσύνη). For in the same body along with the soul are planted the pleasures which call to her: “Abandon prudence, and make haste to gratify us and the body.”’¹⁰⁶

Though deeply interested in dietetic practice and matters of health in general, Xenophon’s Socrates is first of all an ethical authority. His companions are said to consort with him in order to ‘become gentlemen (ἵνα καλοὶ τε κάγαθοὶ γινόμενοι), and be able to do their duty by house and household, and relatives and friends, and city and citizens.’¹⁰⁷ He always, as Xenophon assures us, ‘made his associates better men before he parted with them,’¹⁰⁸ and in private life ‘no man by him was ever deprived of good or involved in ill.’¹⁰⁹ He is even said to have cured vices, such as impiety, crime, gluttony, lust, or sloth, in his fellows ‘by putting into them a desire for goodness, and by giving them confidence that self-discipline would make them gentlemen (καλοὺς κάγαθοὺς ἔσεσθαι).’¹¹⁰

Xenophon’s evidence, no matter whether preserving the original ideas of Socrates or expressing Xenophon’s own idealized views on what a paradigmatic philosopher and moral authority should endorse, attests a great respect for medical dietetics, and especially dietetic prevention. His Socrates lays

103 Xenophon, *Mem.* 1.2.4.1–2, ed. and trans. Marchant; Plato, *Phd.* 65c5–d2, ed. Burnet, trans. Grube.

104 Xenophon, *Mem.* 1.2.4.3–7, ed. and trans. Marchant.

105 Xenophon, *Mem.* 1.2.19.6–10, ed. and trans. Marchant.

106 Xenophon, *Mem.* 1.2.23.4–10, ed. and trans. Marchant.

107 Xenophon, *Mem.* 1.2.48.5–7, ed. and trans. Marchant.

108 Xenophon, *Mem.* 1.2.61.9–10, ed. and trans. Marchant.

109 Xenophon, *Mem.* 1.2.63.6–7, ed. and trans. Marchant.

110 Xenophon, *Mem.* 1.2.2.4–7, ed. and trans. Marchant.

stress on the discipline of the soul, which can moderate regimen of the body and thus save it from pathological imbalance. Xenophon portrays Socrates as an ethical thinker with views not dissimilar from those we have read in the fragments of Democritus. They both propose an instrumental notion of the relation between soul and body. Soul is taken as responsible for the body as its tool or dwelling place, a view that later served as a common assumption for both Plato and Aristotle.

So far I have briefly reviewed the evidence attested between Homer and Plato, where *psuchē* and related expressions describe some psychological aspect of man in opposition to *sōma* as the living body. Having discussed texts embedded in various contexts, in medical debates, rhetorical speeches and exercises¹¹¹ as well as in philosophical speculations, my analysis identifies two remarkable aspects of the discussion. First, no traces of any body-soul dualism or eschatological speculations can be found in this evidence. Instead, most of the passages introduce a distinction between *psuchē* and *sōma* within a therapeutic context, no matter whether a physician, philosopher or rhetorician is speaking. In other words, body and soul are distinguished especially when some pathological condition occurs or threatens to occur, and when some therapy, increased care or precaution is needed. And secondly, two different forms of the *psuchē-sōma* opposition can be distinguished in this evidence: the 'diagnostic' form which recognizes pathological symptoms pertaining to the soul and distinguishes them from those pertaining to the body and physical constitution; and the 'therapeutic' form, which moreover suggests a specific therapy for the soul which is of a different kind than the therapy of the body.

Concerning the historical aspects of the discussion, setting out a chronological order of the discussed texts is practically impossible but, fortunately, nor is it necessary for the present discussion. It is sufficient to suppose that all the authors were more or less contemporaries reflecting and participating in the general discussion about the nature of man articulated in terms of soul and body, and that they were most probably predecessors or contemporaries of both Plato and the author of *On Regimen*. In the rest of this chapter I will focus on the text of *On Regimen* and discuss its account of body and soul against the background reconstructed so far.

111 Gorgias (*Hel.* 21 = DK 82 B 11.21) closes his *Encomium* with a remark that it served the defence of Helen as well as his own amusement (Ἑλένης μὲν ἐγκώμιον, ἑμὸν δὲ παίγνιον), and in this sense one can speak about a rhetorical exercise in opposition to a theoretical account of rhetoric (e.g. Aristotle's *Rhetoric*) or a court speech, as the example of Lysias mentioned above illustrates.

2 Body and Soul in *On Regimen*

2.1 *The Duality of Fire and Water*

Two radically opposite suppositions concerning the notion of soul in *On Regimen* have been suggested in the modern scholarship. Some read the treatise as advocating a kind of dualism,¹¹² in particular between body and soul.¹¹³ Their interpretation is based largely on one passage in chapter 86 at the beginning of book 4, which is often considered to be influenced by 'Orphic' or 'Pythagorean' ideas¹¹⁴ and believed to express a hostile relationship between body and soul.¹¹⁵ Other interpreters have tried to show that the relation of body and soul within the whole treatise is explicitly non-dualistic,¹¹⁶ that body and soul cannot be separated from each other,¹¹⁷ that there is a continuum between the psychological and the physical¹¹⁸ and that the Orphic hypothesis is improbable.¹¹⁹

The discussions of the topic have been obfuscated by two difficulties which need to be considered in advance. First, the so called 'Orphic-Pythagorean' account of soul was often misleadingly identified with the body-soul dualism presented in Plato's 'middle' dialogues, mainly in the *Phaedo*.¹²⁰ In order to overcome this difficulty, in the following sections I will pay special attention to resemblances as well as differences between the Hippocratic account and Plato's *Phaedo*. I will argue mostly on behalf of the second line of interpretations and argue against the alleged 'dualism' of body and soul in *On Regimen*. Nevertheless, I will also identify in the treatise some essential traces of thoughts traditionally connected with early Pythagoreans and the so called Orphics, including a specific notion of an immortal soul which can be reborn, which is considerably different from the one we find in the *Phaedo*.

The second difficulty complicating the discussion relates to the term 'dualism', which has been taken in very different ways both by supporters of the dualistic interpretation and by its critics. In order to avoid this confusion, I start with a discussion concerning terminology. In his dissertation Peck writes that

¹¹² Jones 1931, xlii n. 3.

¹¹³ Gallop 1996, 13 n. 25.

¹¹⁴ Palm 1933, 62–69, July 1960, 168, July 1967, 97 n. 1, Pigeaud 1980, 429.

¹¹⁵ Dodds 1951, 119.

¹¹⁶ Hankinson 1991, 200–206, Gundert 2000, 22–25.

¹¹⁷ Peck 1928, 82.

¹¹⁸ Singer 1992, 141.

¹¹⁹ July 1960, 75, Cambiano 1980, 90–93.

¹²⁰ Cf. Singer 1992, 133.

according to the author of *On Regimen* in the soul and body, as in the world at large, there is a duality, 'which may be presented as a duality of Fire and Water, each of which reaches in turn its appointed maximum (ch. 5).¹²¹ Peck sees a close parallel between the fire-water and soul-body oppositions, but he argues strongly against any kind of dualism in terms of the separability and independence of soul from body.¹²² Inspired by Peck, Jones writes in the introduction to his Loeb edition of the treatise that 'chapter VIII, and perhaps other places also, show a strong Pythagorean influence', and in the footnote he laconically adds: 'E.g. the dualism of fire–water'.¹²³

In order to differentiate the suggestions concerning the elemental dualism from those proposing a body-soul dualism and also those stressing the Pythagorean elements of the dietetic theory in general, some clarification is needed. In what sense, then, can we call the author's view on the relationship between fire and water dualistic? As discussed in detail in the first chapter of this study, the author introduces the two elements in chaps. 3 and 4 in such a way that they can never be fully separated one from the other, 'each by itself suffices neither for itself nor for anything else'.¹²⁴ The existence of fire always presupposes some water from which it is nourished, and we can find no exception to this rule anywhere in the treatise. Accordingly, the two elements are treated as inseparable agents of the everlasting interaction between movement and nutrition. It is therefore possible to call the account of fire and water in *On Regimen* 'dualistic' in the sense that the elementary principles are two in number and that they are not reducible to one single principle.¹²⁵ Nevertheless, this type of dualism leaves no room for the two principles ever to cease to co-operate or even be separated from each other or exist independently, which is the core of the dualistic conception of soul and body represented by Plato. And concerning the possibility that the duality of fire and water has itself some Pythagorean roots, it should be kept in mind that the idea that it is necessary to posit some opposites in order to explain natural phenomena is not exclusively Pythagorean but rather a commonplace in early Greek thought. Likewise, the principle of unity in opposition is no less Heraclitean than it is Pythagorean.

121 Peck 1928, 87.

122 Peck 1928, 82–84.

123 Jones 1931, xliii n. 3.

124 *Vict.* 1.3 (Joly-Byl 126.7–8 = L. 6.472), trans. Jones.

125 Lloyd 1979, 149 also calls the account of fire and water in the treatise a 'dualist element theory', but he does so in order to differentiate it from 'monistic', 'four-element' or 'four-humour' doctrines, without any implication of the separability of fire from water or even soul from body.

There is, therefore, no reason to derive the Hippocratic elemental account from Pythagoreans.

2.2 *Fire and Water in the Soul and Body*

While the author of *On Regimen* defines the elements of fire and water as two distinct but closely connected and inseparable entities, he treats fire as an element operating *in the body*, and at the end of chapter 10 a specific kind of fire is closely related with soul:

The hottest and strongest fire, which controls all things, ordering all things according to nature, imperceptible to sight or touch, wherein (ἐν τούτῳ) are soul, mind, thought, motion, growth, decrease, mutation, sleep, waking. This governs all things always, both here and there, and is never at rest.¹²⁶

Even though the ambiguous expression ἐν τούτῳ does not exactly mean identification of ‘the hottest and strongest’ fire with soul, it certainly establishes a close connection between the two.¹²⁷ In accordance with the notion of fire and

126 *Vict.* 1.10 (Joly-Byl 134.17–20 = L. 6.486), trans. Jones (modified): τὸ θερμότατον καὶ ἰσχυρότατον πῦρ, ὃ περ πάντων κρατεῖ, διέπον ἕκαστα κατὰ φύσιν, ἀθικτον καὶ ὄψει καὶ ψαύσει, ἐν τούτῳ ψυχὴ, νοῦς, φρόνησις, κίνησις, αὔξησις, μείωσις, διάλλαξις, ὕπνος, ἔγερσις. It is worth noting that the only other occurrence of the expression νοῦς is in chap. 11 (*Vict.* 1.11, Joly-Byl 134.22–24 = L. 6.486), where the author speaks of a ‘mind of gods’ (θεῶν νοῦς). Thought (φρόνησις), which is listed here besides *psuchē*, is ascribed to soul in chap. 35 (*Vict.* 1.35, Joly-Byl 150.29 = L. 6.512: περὶ δὲ φρονήσιος ψυχῆς ὀνομαζομένης καὶ ἀφροσύνης ὧδε ἔχει). Surprisingly, the expression for mind (γνώμη), which is also connected to *psuchē* (*Vict.* 1.21 = Joly-Byl 140.5–6 = L. 6.494) and repeatedly ascribed to men (*Vict.* 1.1 = Joly-Byl 122.5 = L. 6.466, 1.12 = Joly-Byl 136.10 = L. 6.488, 1.24 = Joly-Byl 142.4 = L. 6.496), though denied to trees (*Vict.* 3.68 = Joly-Byl 198.12–14 = L. 6.600), is missing from the list in chap. 10.

127 It is rather unclear what the qualification of fire as ‘the hottest and strongest’ (θερμότατον καὶ ἰσχυρότατον) in this passage means. The quality of ‘hot’ is the intrinsic feature of fire, but nowhere else in the treatise is the superlative θερμότατον connected with fire. Without any direct reference to fire, males are considered to be ‘warmer and drier’ (θερμότερα καὶ ξηρότερα) than females in chap. 34 (*Vict.* 1.34, Joly-Byl 150.23 = L. 6.512), and in the discussion of various ages in chap. 33 we read that ‘the moistest and warmest (ὕγρότατα καὶ θερμότατα) are those nearest to birth’ (*Vict.* 1.33, Joly-Byl 150.12–13 = L. 6.512, trans. Jones). In the typology of human physiques in respect of their health in chap. 32 the ‘strongest’ fire is mentioned in two types of fire-water mixtures, but none of them is considered very firm in health (*Vict.* 1.32, Joly-Byl 148.14–20 = L. 6.508, 148.34–150.4 = L. 6.510). I am inclined to understand the qualification ‘the hottest and strongest’ as an emphasis of the very nature of fire, which is the capacity to move and ‘activate’.

water just discussed, we may expect that as fire always needs some water for its nourishment, the same should apply for the soul as well. Indeed, two passages say explicitly that soul *has* a mixture of fire and water.¹²⁸ In other words, soul (which is analogous to fire) is always mixed with some water, and the author can, therefore, speak of a soul *having* a mixture of fire and water. This becomes most evident in chapter 35, which I shall discuss in the next section, but also in chapters 6–10 and 25–31, where the author often uses the expression *psuchē* where we, judging from the context, expect him to speak about seed or sperm.¹²⁹ This fact has led some interpreters to suppose that the Hippocratic author uses the expressions *psuchē* and *sperma* as synonyms,¹³⁰ which is a valuable hypothesis, especially when some limitations are imposed on it. The expression *psuchē* is indeed sometimes used instead of *sperma* in meaning seed or some aspect of a seed but the expression *sperma* never describes anything other than a seed, such as the features discussed in chap. 35 (e.g. intelligence, memory, brightness in sensation, etc.). Furthermore, seed can be denoted not only by *sperma*,¹³¹ to *apokrithen* (i.e. ‘that which has been secreted’)¹³² or *psuchē*,¹³³ but also by *sōma*.¹³⁴ But this does not mean that all the expressions are synonyms.¹³⁵

In chap. 27, where the author begins to discuss all possible combinations of male and female parental seeds, he explains that there is a kind of seed in women as well as men.¹³⁶ ‘When it happens that both are emitted together to one place, they conjoin, the fire to the fire and the water likewise.’¹³⁷ What he wants to say here becomes clearer two chapters later, where he introduces an illustration concerned with coals:

128 *Vict.* 1.7 (Joly-Byl 130.18–19 = L. 6.480), 1.25 (Joly-Byl 142.6–7 = L. 6.496).

129 Despite these difficulties, I can see no reasonable alternative and therefore follow Peck 1928, 73 n. 1 in using ‘soul’ to translate ψυχή ‘for convenience and for no other reason’.

130 Heidel 1914, 157, Joly 1960, 30, Joly 1967, 9 n. 1, Joly-Byl 2003, 238, Gundert 2000, 18 n. 28 and 32. Cf. Aristotle (*DA* 405b3–5) who ascribes a kind of identification of soul with sperm to Hippo.

131 *Vict.* 1.4 (Joly-Byl 126.24 = L. 6.474), 1.30 (Joly-Byl 146.21 = L. 6.504), 1.31 (Joly-Byl 146.30–31 = L. 6.506), 2.45 (Joly-Byl 168.2 = L. 6.544), 4.90 (Joly-Byl 226.10 = L. 6.654), 4.92 (Joly-Byl 228.14 = L. 6.658).

132 *Vict.* 1.27 (Joly-Byl 144.5 = L. 6.500). Cf. 1.28 (Joly-Byl 144.20 and 144.30 = L. 6.502).

133 *Vict.* 1.6 (Joly-Byl 130.8 = L. 6.478 and 130.15 = L. 6.480), 1.7 (Joly-Byl 130.19 = L. 6.480), 1.26 (Joly-Byl 142.6 = L. 6.496), 1.29 (Joly-Byl 146.11–16 = L. 6.504).

134 *Vict.* 1.28 (Joly-Byl 144.20 = L. 6.502).

135 Cf. Singer 1992, 143 n. 46.

136 *Vict.* 1.27 (Joly-Byl 144.3–5 = L. 6.500).

137 *Vict.* 1.27 (Joly-Byl 144.7–9 = L. 6.500), trans. Jones.

If anyone doubts that soul combines with soul, let him consider coals. Let him place lighted coals on lighted coals (κεκαυμένους πρὸς κεκαυμένους),¹³⁸ strong on weak,¹³⁹ giving them nourishment. They will all present a like body, and one will not be distinguished from another, but the whole will be like the body in which they are kindled. And when they have consumed the available nourishment, they dissolve into invisibility. So too it is with the human soul.¹⁴⁰

This passage evidently speaks about a fusion of two parental seeds, with the two heaps of burning coal representing two seeds consisting of fire and water. The coal united into one whole is called *sōma*, and the heat of the coals represents the soul of the one seed which unites with the soul of the other seed (i.e. with the heat of the other heap of coals). Thus in the illustration of the fusion of two parental seeds, both the soul and the body are mentioned. While in this passage the author, in order to describe *psuchē*, discusses *sōma* as well, in chap. 27 the order is reversed: 'If the bodies (*sōmata*) secreted from both [parents] happen to be male, they grow up to the limit of the available matter, and the babies become men brilliant in soul (*psuchē*) and strong in body (*sōma*).'¹⁴¹ I suppose that a seed is described in this account as a *psuchē* or as a *sōma* according to which aspect of the seed's nature the author wants to stress. Regarding the activity and the potency of further development of the seed, he mostly prefers to speak about *psuchē*, while in relation to nutrition, physical power or gender difference, he prefers the expressions *sōma*, to *apokrithen* or *sperma*.

The last passage to be discussed in this section is the only one that explicitly explains the difference between the soul and the body. In chap. 28, where the discussion about the determinants of the foetus' gender begins, we read:

Male and female [seeds] have the capacity to fuse into one solid, both because both are nourished in both and also because soul is the same

138 Here I follow the manuscript reading. Littré reads κεκαυμένους πρὸς μὴ κεκαυμένους, Ermerins and Joly with Byl prefer μὴ κεκαυμένους πρὸς κεκαυμένους. According to both conjectures we should presuppose that burning coals are mixed with non-burning coals. Supposing that the two heaps of coal represent two parental seeds both consisting of fire and water, I can see no reason for such a conjecture. Cf. Jones 1931, 271 n. 1.

139 According to the preceding account in chaps. 28 and 29, one of the parental seeds usually dominates over the other when they commingle, which presupposes that one is relatively stronger than the other.

140 Vict. 1.29 (Joly-Byl 146.11–16 = L. 6.504), trans. Jones (modified).

141 Vict. 1.28 (Joly-Byl 144.20–22 = L. 6.502), trans. Jones (modified).

[thing] in all ensouled beings, although the body of each is different. Now soul is always alike, in a larger creature as in a smaller, for it changes neither through nature nor through force. But the body of no creature is ever the same, either by nature or by force, for it both dissolves into all things and also combines with all things.¹⁴²

According to this passage only bodies differ one from the other with respect to their biological species, gender, age and other individual specifics, but soul is somehow universal and therefore distinguishable from any other soul only by the features of its body. This general statement implies two points that are important for our later discussion: First, whenever the author speaks about any specific soul (e.g. the soul of a particular individual, of a male, or of a human being), he always means soul together with some specific body;¹⁴³ and secondly, whenever he discusses some possibility of influencing (as a rule by regimen) some 'psychological' features of man (intelligence, memory, sense perception, etc.), again, it has to be a soul *together with* or *in* some body.

We have seen so far that soul is often treated as if it corresponds with fire¹⁴⁴ and that fire is always accompanied by some water. But does this mean that body should simply correspond to water or nourishment? The analogy of body and water is most evident in the early stages of embryonic development in chap. 9, where the process of forming a foetus is described as the gradual drying and solidification of the original fluid substance. Some parts are totally consumed by fire, others are only dried and formed into required shapes (bones, sinews, flesh, etc.); the belly is formed where the moisture 'was most abundant', and various passages are made.¹⁴⁵

Concerning the soul-body relationship in adulthood and in fully developed individuals, several passages suggest that soul receives its moisture from the body. Analogous to fire, which 'has the moist from water', *psuchē* also has some

142 *Vict.* 1.28 (Joly-Byl 144.15–20 = L. 6.500–502), trans. Jones (modified).

143 Cf. Peck 1928, 73–74 n. 1: 'Now it is clear from the foregoing that soul is not concerned with the nature or species of the body which it animates; for its business is simply to provide motion for the body and to enable its senses to function. Thus there needs be no difference in the soul of man, woman, or beast; and the author himself affirms that every soul, or all soul, whatever it is, is the same (chh. 27, 28). It is in their bodies that men differ from women, and human beings from beasts.'

144 Cf. Peck 1928, 83.

145 *Vict.* 1.9 (Joly-Byl 132.12–134.4 = L. 6.482–484). Cf. Hüffmeier 1961, 70: 'Bei der Formung des Körpers dient das Wasser als Rohstoff, während das Feuer gestaltet. Dabei ist das Wasser mit Feuer und das Feuer mit Wasser vermischt. Das (mit Feuer vermengte) Wasser wird später der Körper, das (mit Wasser vermengte) Feuer ist die Seele.'

moisture¹⁴⁶ which is said to be supplied by the body,¹⁴⁷ or consumed from the body,¹⁴⁸ the belly and the flesh.¹⁴⁹ Any activity (such as seeing, hearing or thinking) causes the soul to be moved, warmed and dried.¹⁵⁰ And conversely, when the soul is at rest, inaction moistens and weakens the body, 'for the soul, being at rest, does not consume the moisture of the body'.¹⁵¹

Drawing on the previous considerations, I tentatively conclude that body is treated in *On Regimen* not only (1) as a source of nourishment (i.e. water), but also (2) as some organic arrangement specific to each biological species, gender and individual constitution, which comes to light during the early stages of ontogenetic development as a result of the goal-directed activities of fire, from a seed into a fully developed individual. The difference between meanings (1) and (2), as I illustrate shortly, serves as an important clue in assessing the dualistic reading of chap. 86. But before opening this discussion, let me focus on the account in chap. 35 where soul is presented as a relatively autonomous entity operating within the body, responsible for sense perception, thinking and memory, and, at the same time, depending on the healthy condition of the body and on the nutrition provided by the body.

2.3 *Therapy of Thought, Perception and Memory*

Questions concerning the nature of intelligence, its seat and conditions influencing this capacity had been frequently discussed already in the fifth century. Plato's Socrates in the *Phaedo* mentions, among the most typical topics discussed in the field of 'inquiry into nature', the following questions: 'Do we think with our blood, or air, or fire, or none of these, and does the brain provide our senses of hearing and sight and smell, from which come memory and opinion, and from memory and opinion which has become stable, comes knowledge?'¹⁵² While Empedocles, for instance, explained intelligence with reference to the blood, and Alcmaeon and the author of the Hippocratic *On Sacred Disease* with reference to the brain,¹⁵³ the author of *On Regimen* ascribes intellectual capacities to the soul. It is certainly 'one of the rare pre-Platonic theories

146 *Vict.* 2.60 (Joly-Byl 184.2 = L. 6.574).

147 *Vict.* 2.56 (Joly-Byl 180.11–14 = L. 6.568); cf. *Epid.* 6.5.2 (Manetti-Roselli 106.1–2 = L. 5.314.14–15).

148 *Vict.* 2.62 (Joly-Byl 184.27–186.2 = L. 6.576–578).

149 *Vict.* 2.60 (Joly-Byl 182.28–30 = L. 6.574).

150 *Vict.* 2.61 (Joly-Byl 184.7–16 = L. 6.574–576).

151 *Vict.* 2.60 (Joly-Byl 182.27–28 = L. 6.574), trans. Jones.

152 Plato, *Phd.* 96b3–8, trans. Grube.

153 Alcmaeon, DK 24 A 5, A 8, A 10; Empedocles, DK 31 B 105, *Morb. Sacr.* 16–17 (Jouanna 29.4–31.15 = L. 6.390–394).

of intelligence that has been preserved, other than enigmatic fragments or watered-down doxographies'.¹⁵⁴ Moreover, as will be discussed in detail below, it is the earliest extant text directly connecting insanity (*maniē*) with soul.¹⁵⁵

We have already seen that the classification of the human 'condition' (*hexis*) or 'nature' (*phusis*) in chap. 32 consists of six types of fire-water mixture according to their dispositions for health and diseases.¹⁵⁶ Similarly, also in chap. 35 the conditions of the soul determining intelligence and other psychic capacities are classified according to seven different mixtures of fire and water. Although the qualities of fire and water discussed in both chapters may seem to coincide (e.g. in both chapters the author speaks about 'the moistest fire' and 'the driest water'), they are never mentioned in the same combination. This suggests that the accounts of the physical health and the soul capacities cannot be reduced to a single pattern which would conveniently explain both aspects of the nature of man. In chap. 32 the whole typology is based on a combination of four extreme qualities of fire and four of water,¹⁵⁷ whilst in chap. 35 only 'the most intelligent' and most perfectly balanced mixture is defined by a combination of specific qualities ('the moistest fire and the driest water'). The other six types of fire-water mixture are specified merely by the relationship of fire and water in terms of the supremacy of the one over the other and the extent of this supremacy, which is a considerably different scheme to that used in chap. 32.¹⁵⁸

The classification of different kinds of intelligence is perfectly symmetrical and, as Jouanna puts it, 'happily combines elegance with geometry'.¹⁵⁹ There is one ideally balanced and therefore most intelligent constitution (1), and two extreme types of mixtures which represent two kinds of madness, one dominated by water (4) and the other dominated by fire (7). In between these two extremities and the ideal constitution there are four intermediate compositions, two influenced by the predominance of the water (2 and 3) and two by the fire (5 and 6). In what follows I shall first summarize the account of all the constitutions and then focus in detail on the underlying theory of thought and

154 Cf. Jouanna 2012, 200.

155 Cf. Jouanna 2013, 100.

156 See chap. 1, pp+. 83–85.

157 Fire can be ἀραιότατον (*Vict.* 1.32, Joly-Byl 148.3 = L. 6.506, 148.10 = L. 6.508, 150.4–5 = L. 6.510), ισχυρότατον (Joly-Byl 148.14 = L. 6.508, 148.35 = L. 6.510), λεπτότατον (Joly-Byl 148.21 = L. 6.508) or ὑγρότατον (Joly-Byl 148.28 = L. 6.508), water can be λεπτότατον (Joly-Byl 148.3 = L. 6.506, 148.35 = L. 6.510), πυκνότατον (Joly-Byl 148.28 = L. 6.510), παχύτατον (Joly-Byl 148.20–21 = L. 6.508) or ξηρότατον (Joly-Byl 150.5 = L. 6.510).

158 Cf. Hankinson 1991.

159 Jouanna 2012, 201.

perception depending on the movement of the soul through certain bodily passages.

As has been said, the 'most intelligent' soul with 'the best memory' is assigned to a mixture of 'the moistest fire and the driest water'. In this mixture both fire and water are 'most self-sufficing' by virtue of their mutual balance. The explanation of the effect of this specific mixture closely resembles the general description of fire and water in chaps. 3 and 4: 'Fire has the moisture from the water and the water the dryness from the fire; each is thus most self-sufficing.'¹⁶⁰ The fact that fire is not in need of nourishment 'so as to wander far' and that the water does not lack motion 'as to be dulled' secures their balance and self-sufficiency in the mixture: 'So each is thus most self-sufficing by itself, as are both when blended with one another.'¹⁶¹

The second constitution is said to consist of 'the purest fire and water', where 'the fire falls a little short of water'. Such persons are also supposed to be intelligent, but less so than those with the first type of constitution, 'because the fire, mastered by the water and so making slow motion, falls rather dully on the senses.' Nevertheless, they are 'constant in their attention' and 'under the right regimen' they can become 'more intelligent and sharper than natural endowment warrants'. The author advises the application of a regimen 'inclining towards fire', and warns against practising 'wrestling, massage or like exercises', for such activities make the passages (πόροι) become hollow and filled with surfeit, and 'the motion of the soul is of necessity weighted down by such things'. Walks after dinner, in the early morning and after running are especially beneficial for the following reasons: 'after dinner, that the soul may receive drier nourishment from the things that enter; in the early morning, that the passages may be emptied of moisture and the outlets (διέξοδοι) may be emptied of moisture and the passages of the soul (οἱ πόροι τῆς ψυχῆς) may not be obstructed; after exercise, in order that the secretion from running may not be left behind in the body to contaminate the soul, obstruct the outlets (διέξοδοι) and trouble the nourishment.'¹⁶²

160 *Vict.* 1.35 (Joly-Byl 150.31–152.1 = L. 512–514), trans. Jones. Compare especially *Vict.* 1.3 (Joly-Byl 126.6–8 = L. 6.472), trans. Jones (modified): 'Both together these [elements] are sufficient for one another and for everything else, but each by itself suffices neither for itself nor for anything else'; and *Vict.* 1.4 (Joly-Byl 126.21–23 = L. 6.474), trans. Jones: 'Mutually too fire has the moist from water, for in fire there is moisture, and water has the dry from fire, for there is dryness in water also.'

161 *Vict.* 1.35 (Joly-Byl 150.29–152.8 = L. 6.512–514), trans. Jones.

162 *Vict.* 1.35 (Joly-Byl 152.8–24 = L. 6.514–516), trans. Jones (modified).

In the third constitution fire is even more inferior to water than in the previous case. 'Such a soul is necessarily slower' and persons of this constitution 'are called silly'.¹⁶³ The explanation of this condition is of highest importance for the following discussion and deserves therefore full quotation:

For as the circuit (περίοδος) is slow, the senses, being quick, meet their objects spasmodically, and their combination is very partial owing to the slowness of the circuit (περίοδος). For the senses of the soul that act through sight or hearing are quick; while those that act through touch are slower, and produce a deeper impression. Accordingly, persons of this kind perceive as well as others the sensations of cold, hot and so on, but they cannot perceive sensations of sight or hearing unless they are already familiar with them. For unless the soul be shaken by the fire that strikes it, it cannot perceive its character. Souls of such a kind have this defect because of their coarseness. But if their regimen be rightly regulated, even these may improve.¹⁶⁴

Those of the fourth constitution, in which the fire is even more overpowered by the water, are called by some 'senseless' and by others 'grossly stupid'. Their 'madness' (μᾶνίη),¹⁶⁵ or rather 'imbecility', as Jones translates it, 'inclines to slowness; they weep for no reason, fear what is not dreadful, are pained at what does not affect them, and their sensations are really not at all those that sensible persons should feel.' The author recommends treatment of such constitutions with vapour baths, purges with hellebore and other means of reducing flesh and drying the body.¹⁶⁶

The fifth constitution is defined by a pure mixture of fire with insufficiently powerful water. In a healthy body such a soul is said to be 'intelligent, quickly perceiving without frequent variations the objects that strike it'. Since the fire slightly overpowers the water, such constitutions benefit from a regimen inclined towards water, and in particular excessive exercises may be harmful.¹⁶⁷

'But if the power of the water be further mastered by the fire', suggests the author for the sixth constitution, 'the soul must be quicker, in proportion to its more rapid motion, and strike its sensations more rapidly, but be less constant than the souls discussed above, because it more rapidly passes judgement on

163 *Vict.* 1.35 (Joly-Byl 152.28–30 = L. 6.516), trans. Jones (modified).

164 *Vict.* 1.35 (Joly-Byl 152.30–154.3 = L. 6.516), trans. Jones.

165 This term covers quite a range of various pathologic states, see Pigeaud 1981, 100–111.

166 *Vict.* 1.35 (Joly-Byl 154.7–13 = L. 6.518), trans. Jones.

167 *Vict.* 1.35 (Joly-Byl 154.13–21 = L. 6.518), trans. Jones.

the things presented to it, and on account of its speed rushes on to too many objects'. In accordance with the dietetic logic, such constitutions are 'benefited by a regimen inclining to water more than the preceding . . . To reduce the flesh of such persons conduces to their intelligence; for abundance of flesh cannot fail to result in inflammation of the blood (αἵματος φλεγμονὴν ἀνάγκη γίνεσθαι), and when this happens to a soul of this sort it turns to madness (ἐς μανίην καθίσταται), as the water has been mastered and the fire attracted'. Such people are also recommended to eat a meal before they go about their duties, 'for their soul is more stable when it is mixed with its appropriate nourishment than when it lacks nourishment'.¹⁶⁸

The seventh constitution is characterized by the fire which masters the water even more than in the previous constitution. Such a soul is 'too quick' and such persons are said to suffer from nocturnal pollutions (ὄνειρώσσειν).¹⁶⁹ They are also called 'half-mad' and their condition is next door to madness (ἔγγιστα μανίης), for even a slight inflammation may result in madness (μαίνονται), 'whether arising from intoxication, or from overabundance of flesh, or from eating too much meat'. They should naturally abstain from such things, they are advised to prevent the body from being dried up by the seasonal weather, and a series of other dietetic prescriptions is suggested. 'With this treatment', concludes the author, 'such a soul may be highly intellectual'.¹⁷⁰

It is clear from the wording of these passages that both thinking and sensation depend on the soul's movement, on its speed and on the throughput of

168 *Vict.* 1.35 (Joly-Byl 154.21–156.3 = L. 6.518–520), trans. Jones.

169 Most interpreters understand the expression ὄνειρώσσειν as a kind of dreaming (e.g. Jones 1931, 291, Joly-Byl 2003, 157, van der Eijk 2011a, 263, Jouanna 2013, 101), although it is in my opinion a misreading. The verb ὄνειρώσσειν has two basic meanings, to dream of something or to have an emission of semen during sleep (LSJ s.v. ὄνειρώσσω). Supposing that our author speaks about dreaming, dreams as such, no matter what their content, would indicate a specific pathological state of the human constitution, which contradicts the account of dream visions in book 4, and especially those dreams interpreted as a sign of a healthy condition (e.g. *Vict.* 4.88 = Joly-Byl 220.1–5 = L. 6.642). Moreover, it is not ὄνειρος or ὄνειρον but exclusively ἐνύπνιον which is used in the fourth book to denote dream visions (*Vict.* 4.87 = Joly-Byl 218.14 = L. 6.640, 4.88 = 220.1 = L. 6.642, 4.88 = 220.6 = L. 6.642). Also the fact that other Hippocratic authors use the verb ὄνειρώσσειν as a technical term for nocturnal emission (e.g. *Int.* 47 = L. 7.282, or *Morb.* 2.51 = L. 7.78 where Littré reads ὄνειρώσσει while Potter 1988, 284 prefers ὄνειριάει), alongside ἐξὀνειρώσσειν, which also appears in our treatise (*Vict.* 2.56 = Joly-Byl 174.31 = L. 6.558), speaks for the same meaning in the present passage. However, an interesting relation between emissions and insanity is to be found in the Hippocratic *Genit.* 1 (L. 7.470–472).

170 *Vict.* 1.35 (Joly-Byl 156.3–18 = L. 6.520–522), trans. Jones.

its passages, which can be blocked by residues of nourishment. On the other hand, due to the author's negligence in anatomical descriptions, which unfortunately pervades all his account, we can only speculate as to what the passages (πόροι) and the circuit (περίοδος) of the soul are exactly and where in the body we can find them, what the outlets (διέξοδοι) are which can be blocked and thus hinder the movement of the soul, etc. Some clues, nevertheless, can be found within the embryological discussion in chaps. 9–10. Outlets are mentioned for the first time in chap. 9, where we read that fire, which arranges the body according to nature, cannot make lasting outlets (τάς διέξόδους χρονίας) through the hard and dry parts of the body,¹⁷¹ but it can do so through the soft and moist parts. First the 'greatest outlet' (μεγίστην διέξοδον) from the belly is made by fire,¹⁷² and then other outlets are made 'for the breath and to supply and distribute nourishment (τοῦ πνεύματος διέξόδους καὶ τροφῆς ἐπαγωγὴν καὶ διάπεψιν)'.¹⁷³ Shortly after this claim the fire, shut up in the body, is said to make 'three circuits (περιόδους τρισσάς)'.¹⁷⁴ A few lines later, in chap. 10, the same idea is repeated with the additional specification that the circuit towards 'the hollows of the moist' relates to the power of the moon, and that the one towards the outer circumference and solid enclosure relates to the power of the stars. The middle circuit is bounded both within and without, and from the parallel passage in chap. 89 it can be deduced that this circuit relates to the power of the sun.¹⁷⁵ We can therefore infer that soul most probably moves around the body through some of the passages made by fire.¹⁷⁶

It follows from chap. 35 that the intelligence, sharp-wittedness and concentration of mind depend on the quickness or slowness of the soul and on the mixture of fire and water that rotates around the circuits in the body. Jouanna illustrates the movement of the soul with a cyclotron:

171 *Vict.* 1.9 (Joly-Byl 132.23 = L. 6.484).

172 *Vict.* 1.9 (Joly-Byl 132.27 = L. 6.484).

173 *Vict.* 1.9 (Joly-Byl 132.29 = L. 6.484), trans. Jones.

174 We could speak more literally of three 'groups of circuits' (*Vict.* 1.9 = Joly-Byl 134.13–16 = L. 6.486: περιόδους τρισσάς... αἱ μὲν... αἱ δὲ... αἱ δέ), as both Jones and Joly with Byl do. But Jouanna 1998, 163–164 convincingly argues that only three circuits should be presupposed here, in which I follow him. See above, p. 134 n. 127.

175 Also earlier thinkers, such as Heraclitus (DK 22 B 67a) or Alcmaeon (DK 24 A 1), are reported to draw an analogy in their accounts between sun and soul.

176 In Jouanna's interpretation (2012, 205), the 'hottest and strongest fire' in chap. 10 is located in the middle circuit which corresponds to the circuit of the soul. This is certainly a possible, although not conclusive, reading of the passage. Even more speculative is the connection of this middle circuit with the heart (Joly 1960, 41–42, Hulskamp 2008, 163–164), an organ never explicitly mentioned in the treatise.

Fire is the accelerator of the particles of the soul; water is its brake. Thus, when water and fire are in equilibrium, the speed of the soul's rotation is ideal. When fire overpowers water, the soul spins faster (ch. 35, sixth category θάσσον κινεῖται), and if the fire is much more powerful than the water (ch. 35, seventh category), it rotates too fast and causes excited madness. On the other hand, if water dominates fire, and if it slows down (ch. 35, third category βραδυτέρην ἀνάγκη ταύτην εἶναι), and if it slows down dangerously, it leads to the madness of stupidity, which the author describes, significantly, as μανίη ἐπὶ τὸ βραδύτερον (ch. 35, fourth category).¹⁷⁷

As pointed out by more than one scholar,¹⁷⁸ the Hippocratic theory of the different kinds of intelligence of souls closely resembles the concept reported by Theophrastus and ascribed to Empedocles.¹⁷⁹ Both Empedocles and the Hippocratic author, as summarized by Jouanna, (a) discuss the same subject, i.e. intelligence and its opposite; (b) hold that the source of thought is a fluid made up of the combination of primary elements which are in a state of mixture; (c) the different degrees of intelligence are explained by the different types of mixture; (d) the most intelligent condition is due to a perfect mixture of primary elements.¹⁸⁰ In between the most intelligent and the least intelligent mixtures Empedocles posits two intermediate categories, which are almost exactly the same as the second and sixth category in *On Regimen*.¹⁸¹ But *On Regimen* provides a more complex elaboration of the theory than

177 Jouanna 2012, 205. In his remarkable interpretation, Jouanna further specifies the mechanism of thinking in *On Regimen* as follows (207): 'Understanding comes about when sensory particles (αἰσθήσεις), coming from the object, rush (προσπίπτουσιν) towards the soul and are mixed (ξυμμίσγονται) into its rotation (περίοδος). However, the soul, for its part, is not passive. It is not like the piece of wax of the *Theatetus* where the sensory particles leave an imprint. The particles of the soul, animated by their circular movement, rush towards the sensory particles, which are present in the gates of the soul, to catch them. The slower the circuit is, the slower the movement of the soul towards the sensory particles will be; the quicker the rotation is, the more rapid the movement of the soul towards the sensory particles will be. Thus, the more rapid the revolution is, the more sensory particles the soul will digest and the more intelligent it will be. Yet the soul should not turn too fast, because then it would not be able to digest the particles, which would lead to hallucinatory madness.'

178 Fredrich 1899, 125 n. 3, Joly 1960, 88–89, Byl 2002, 217–220, Jouanna 2012, 214–215.

179 Theophrastus, *De sensu* 10–11 (ed. Diels).

180 Jouanna 2012, 215.

181 Jouanna 2012, 216–217.

Empedocles, who recognizes only two categories of intermediary intelligence, whilst *On Regimen* has four.¹⁸²

Another, even more significant similarity between the two accounts concerns the explanations given to the intermediary category of intelligence, where the liveliness of spirit is joined to the mildness of character. The author of *On Regimen* holds that it is due to the quickness (διὰ ταχυτήτα), which Jouanna renders as ‘the quickness of the circular movement of the soul’,¹⁸³ and Empedocles, according to Theophrastus, ‘due to the rapid movement of blood’ (διὰ τὴν ὀξύτητα τῆς τοῦ αἵματος φορᾶς).¹⁸⁴ It is far from clear what exactly Empedocles’ ‘rapid movement’ means, and Jouanna entertains the possibility that Empedocles has already introduced the liveliness of the rotation within the body in order to explain the different types of intelligence.¹⁸⁵ In any case, it is obvious that on both accounts, the Hippocratic and that of Empedocles, ‘the theory of intelligence is connected with the liveliness of the movement of a fluid (composed of the mixture of the primary elements), which is the source of thought, a liveliness that varies depending on the composition of that fluid’.¹⁸⁶ The similarity is even more interesting when we consider the possibility that the circuit of the soul may be identical with the flow of blood mentioned in chap. 90.¹⁸⁷ If so, the theory of *On Regimen* would mark a transposition of historical importance: ‘it concerns not only the circulation of the blood, but also the rotation of the soul’.¹⁸⁸

182 Jouanna 2012, 217.

183 Jouanna 2012, 217.

184 Theophrastus, *De sensu* 11.7–8 (ed. Diels).

185 Jouanna 2012, 219.

186 Jouanna 2012, 219.

187 Cf. Hüffmeier 1961, 76.

188 Jouanna 2012, 217. It is appropriate, in my opinion, to stress the possibility that soul is connected with blood in *On Regimen*, though this claim is not free from interpretative difficulties. The ‘inflammation of blood’ mentioned in the sixth category discussed in chap. 35, which is said to cause madness of the soul, is the most obvious point of reference for such a link (cf. Hüffmeier 1961, 76). But caution is needed when speaking about ‘circulation’ of blood, which is a modern concept with no clear precedent in ancient texts. The Hippocratic author says in chap. 90 (*Vict.* 4.90, Joly-Byl 226.13–15 = L. 6.654): ‘Rivers that do not flow as they should indicate *periodos* of blood, a sign of excess if they flow too abundantly and of deficit if they flow in too small amount’ (ποταμοὶ δὲ μὴ κατὰ τρόπον γινόμενοι αἵματος περιόδου σημαίνουσι, πλεόν μὲν ῥέοντες ὑπερβολήν, ἔλασσον δὲ ῥέοντες ἔλλειψιν). The Greek term *periódos* does not necessarily signify a circular motion but may also mean simply a passage of a fluid. As rivers do not flow in a circle (unless we would speak about the mythical river Okeanos), I do not see any necessity for assuming that the *periodos* of blood means circulation. Accordingly, it is more natural to speak about a

After having outlined some of the most important features of the physiology of thinking in *On Regimen* and summarized relevant modern interpretations of the topic, let me conclude with some remarks concerning the therapy of the soul. I have suggested that at least some texts of the Hippocratic collection distinguish psychic symptoms from those pertaining to the body but that they never suggest a specific therapy for the soul as opposed to that for the body. This is, in principle, true also for *On Regimen*. Not only is the prescription for improving the soul's capacities in chap. 35 in principle of the same kind as those for the body in chap. 32, but also the diagnoses from dreams listed in book 4 confirm this therapeutic approach. For instance, when some surfeit in the body occurs and causes 'disturbance of the soul' which consequently dreams about things 'contrary to the acts of the day', the author advises 'treatment of the body'.¹⁸⁹ If one dreams that he or she is eating or drinking his or her usual food or drink, 'it indicates a want of nourishment and a desire of the soul'.¹⁹⁰ Since this is interpreted as a sign of an excess of nourishment, the author simply advises that one 'reduce the quantity of food'.¹⁹¹

Nevertheless, there is also one exception to this general pattern which has already been mentioned more than once but has not yet been discussed. In chap. 89, the author gives an example of dreams in which heavenly bodies wander about, 'some in one way and others in another', which, according to the author, indicates 'a disturbance of the soul arising from thinking (ψυχῆς τινὰ

linear flow of blood in the blood vessels similar to the flow of water in the irrigation channels in a garden (cf. Plato, *Tim.* 77c–e, Aristotle, *PA* 668a11–14, the Hippocratic *Nat. Hom.* 11, Jouanna 192.15–196.15 = L. 6.58–60 and *Oss.* 9 = L. 9.174–176, and Aristotle's report on Syennesis, Diogenes of Apollonia and Polybus in *HA* 512b12–513a7). The problem of this reading is that it substantially complicates the possibility of identifying the flow of blood with the movement of the soul. If we assume that the stream of blood is one and the same with the movement of the soul, and accordingly that soul does not move in a circle but rather goes with the flow of blood, there is a serious difficulty concerning the question of how it can transport sense data and other stimuli. There would have to be either some mechanism enabling the delivery of them against the flow, or blood would have to move in both directions (either simultaneously or in alternation), for which we have no support either in this text or in any other extant account of the time, as far as I know.

189 *Vict.* 4.88 (Joly-Byl 220.5–10 = L. 6.642–644), trans. Jones.

190 *Vict.* 4.93 (Joly-Byl 228.26–27 = L. 6.660), trans. Jones (modified): ἔνδειαν σημαίνει τροφῆς καὶ ψυχῆς ἐπιθυμίην. Manuscripts M and θ read ἀθυμίην (Jones translates as 'depression' of soul), but Littré, followed by Joly and Byl, emends to ἐπιθυμίην ('desire' of the soul) after the parallel mentioned a few lines later (*Vict.* 4.93, Joly-Byl 230.1–2 = L. 6.660, trans. Jones) where the author says that 'whenever a man thinks that he beholds familiar objects, it indicates a desire of the soul (ψυχῆς ἐπιθυμίην σημαίνει)'.

191 *Vict.* 4.93 (Joly-Byl 228.29 = L. 6.660), trans. Jones.

τάραξιν σημαίνει ὑπὸ μερίμνης).¹⁹² As for the suggested therapy, it is beneficial in such a case to ‘have a rest’ (or ‘leave off work’, ῥαθυμῆσαι) and ‘the soul should be turned to the contemplation (πρὸς θεωρίας) of comic things, if possible, if not, to such other things as will bring most pleasure when looked at, for two or three days, and recovery will take place.’¹⁹³

The physiological aspect of such a therapy is implied in the fact that everyday duties are dropped as well as in the recommended activities of soul which necessarily have some physiological consequences due to the general nature of sense perception and thinking. In chap. 61, where the author embarks upon the discussion of exercises (*ponoi*), he distinguishes natural and violent exercises in the following way:

Natural exercises are those of sight, hearing, voice and thought (ὄψις πόνος, ἀκοή, φωνή, μερίμνη). The nature of sight is as follows. The soul, applying itself to what it can see, is moved and warmed. As it warms it dries, the moisture having been emptied out. Through hearing, when noise strikes the soul, the latter is shaken and exercised, and as it is exercised it is warmed and dried. By all the thoughts that come to a man the soul is warmed and dried; consuming the moisture it is exercised, it empties the flesh and it makes a man thin. Exercises of the voice, whether speech, reading or singing, all these move the soul. And as it moves it grows warm and dry, and consumes the moisture.¹⁹⁴

In principle, all these natural exercises make the soul warm and dry, and for these effects they can also be employed in the dietetic therapy.¹⁹⁵ Accordingly, the recommended contemplation of comic and other things that bring pleasure to the disturbed soul in chap. 89 certainly aims to provide some physiological effects. But at the same time it also presupposes something which goes beyond a mere physiological explanation, namely that ‘for sorrow, laughter is the best medicine’, as Hulskamp puts it.¹⁹⁶ In this sense, I believe, the

192 The expression μερίμνη can mean more specifically care, pursuit, solicitude, or even anxiety (cf. LSJ, s.v. μέριμνα). But since the same expression stands in chap. 61 (*Vict.* 2.61, Joly-Byl 184.9 = L. 6.574) for thinking in general, alongside with seeing, hearing and voice, I take it in this general sense also in the present passage.

193 *Vict.* 4.89 (Joly-Byl 222.28–31 = L. 6.648–650), trans. Jones (modified).

194 *Vict.* 2.61 (Joly-Byl 184.8–14 = L. 6.574–576), trans. Jones.

195 Cf. *Vict.* 4.88 (Joly-Byl 220.16 = L. 6.644) and 4.89 (Joly-Byl 222.5–6 = L. 6.646) where voice exercises are recommended alongside other dietetic procedures.

196 Hulskamp 2008, 169.

passage is comparable to Democritus' advice for curing a suffering soul and therefore stands as a genuine piece of psychotherapy unprecedented in other Hippocratic treatises.¹⁹⁷

2.4 *The Sleeping Body and the Dreaming Soul*

At the outset of book 4, where 'signs that come in sleep' and their function in a dietetic diagnosis are discussed, we find the crucial passage to which most of the asserters of the dualistic reading of the soul-body relation in *On Regimen* refer. It reads as follows:

For when the body is awake the soul is its servant (τῷ σώματι ὑπηρετέουσα), and is never her own mistress (οὐ γίνεται αὐτῇ ἑωυτῆς), but divides her attention among many things, assigning a part of it to each faculty of the body—to hearing, to sight, to touch, to walking, and to acts of the whole body; but the thought never enjoys independence (αὐτὴ δ' ἑωυτῆς ἢ διάνοια οὐ γίνεται). But when the body is at rest, the soul, being set in motion and awake, administers her own household (ἑωυτῆς οἶκον), and of herself performs all the acts of the body. For the body when asleep does not perceive (οὐκ αἰσθάνεται), but the soul when awake perceives all (γινώσκει πάντα): sees what is visible, hears what is audible, walks, touches, feels pain, ponders, in her limited space (ἐν ὀλίγῳ ἐοῦσα).¹⁹⁸ All the functions of body and of soul are performed by the soul during sleep.¹⁹⁹

197 The uniqueness of this passage in the whole Hippocratic corpus is claimed by Entralgo 1970, 341–242, and Gundert 2000, 25 n. 69.

198 Joly and Byl read ἐν ὀλίγῳ ἐοῦσα after ms. θ and translate it 'dans l'espace étroit où elle se tient', arguing that it corresponds to the idea presented in Plato's *Phd.* 67c (Joly-Byl 2003, 297). As for alternative readings, ms. M has ἐν ὀλίγῳ and Mack (followed by Ermerins and Jones) emends it to ἐνὶ λόγῳ (i.e. 'in a word', cf. *Vict.* 1.10 = Joly-Byl 134.5 = L. 6.484: 'Ἐνὶ δὲ λόγῳ'). I am inclined to prefer the reading of ms. θ, though not because of the alleged resemblance with the passage in *Phaedo* but rather for the parallel with the following description from Galen's *On Diagnosis from Dreams* (Guidorizzi 104.33–36 = K. 6.834, trans. Hulskamp 2008, 203): 'For the soul, in sleep having dived into the depth of the body and being severed from outside perception, seems to perceive the situation in the body, and to receive images of all the things it yearns for, as if these things are already present' (ἔοικε γὰρ ἐν τοῖς ὕπνοις εἰς τὸ βάθος τοῦ σώματος ἡ ψυχὴ εἰσδῶσα καὶ τῶν ἐκτὸς ἀποχωρήσασα αἰσθητῶν τῆς κατὰ τὸ σῶμα διαθέσεως αἰσθάνεσθαι, πάντων τε ὧν ὀρέγεται, τούτων ὡς ἤδη παρόντων λαμβάνειν φαντασίαν). Cf. Hulskamp 2008, 200–206 who points to the similarity of Galen's description with *On Regimen*.

199 *Vict.* 4.86 (Joly-Byl 218.4–12 = L. 6.640), trans. Jones (modified).

This passage has been compared with Pindar's fragment 131b,²⁰⁰ generally regarded as 'Orphic' or 'Pythagorean', and also with certain passages in Plato's *Phaedo*.²⁰¹ E.R. Dodds has developed this idea in his ground-breaking and influential book *The Greeks and the Irrational*, where the statement that dreaming soul 'becomes its own mistress' leads him to conclude that 'here the influence of the Orphic view is evident'.²⁰² By 'Orphic' he means the inclination of religious minds 'to see in the significant dream evidence of the innate powers of the soul itself, which it could exercise when liberated by sleep from the gross importunities of the body'.²⁰³ He interprets the meaning of the passage in *On Regimen* as a kind of liberation of soul out of its bodily 'prisonhouse' during sleep, which corresponds to 'Puritan psychology' (as Dodds calls the core of the Orphic and Pythagorean beliefs about the soul).²⁰⁴ A much more cautious interpretation has been offered by G. Cambiano²⁰⁵ who convincingly argues in favour of the non-dualistic reading and stresses the 'material' nature of the soul. Van der Eijk, on the one hand, follows Cambiano in his refusal of the Platonic reading of the Hippocratic text, on the other he still holds that in sleep soul can 'function independently',²⁰⁶ and that the author in chap. 86 'appeals to a rather dualistic conception of the relation between soul and body',²⁰⁷ and 'presents soul and body as two separate entities which co-operate in the waking state but whose co-operation ends in sleep'.²⁰⁸ In what follows I will argue against the identification of the Hippocratic passage with the dualistic accounts of Plato and Pindar, and suggest that even though soul and body are treated as two separate entities and their co-operation ends in terms of their common activities when body sleeps and soul dreams, they do not cease to

200 Pindar, fr. 131b (ed. Maehler), trans. Dodds: 'Each man's body follows the call of overpowering death; yet still there is left alive an image of life (αἰῶνος εἰδωλον), for this alone is from the gods. It sleeps while the limbs are active; but while the man sleeps it often shows in dreams a decision of joy or adversity to come.'

201 Palm 1933, 62–69.

202 Dodds 1951, 119.

203 Dodds 1951, 118.

204 Dodds 1951, 149. Gallop 1996, 13 n. 25, for instance, takes over Dodds' view and without any further argumentation simply claims that 'dualism is clearly formulated in the Hippocratic *On Regimen* (IV, 86)'.

205 Cambiano 1980.

206 Van der Eijk 2005, 125.

207 Van der Eijk 2005, 198.

208 Van der Eijk 2005, 199.

co-operate in terms of nutrition, and therefore the 'independence' of a dreaming soul on body is considerably limited in this sense.²⁰⁹

Despite the evident similarities between the Hippocratic passage and the parallel passages in Pindar and Plato, there are also some important conceptual differences that preclude the identification of the position of the author of *On Regimen* with the dualistic ideas presented by the other two authors. Let me begin with the rendering of the expression *oikos* as a 'prisonhouse' suggested by Dodds, which is a misleading prejudice based on Plato's accounts²¹⁰ and finds no support in the text.²¹¹ The dreaming soul in the *On Regimen* passage performs all the common functions of body and soul, which does not suggest any antagonistic relation between the two, but rather cooperation and reciprocal dependence. This is clear from the interpretation of dreams, which follows the introductory passage: 'Such dreams as repeat in the night a man's actions or thoughts in the day-time, representing them as occurring naturally, just as they were done or planned during the day in a normal act—these are good for man. They signify health, because the soul abides by the purposes of the day, and is overpowered neither by surfeit nor by depletion nor by any attack from without.'²¹² If the aim of the soul during sleep were to free itself from the prison of the body, in a manner similar to the soul's departure after death,²¹³ it would most probably act and think differently than it would in the day-time prison. When this happens and the soul departs in dreams from its waking experience, the author of *On Regimen* interprets the phenomenon as pathological and calling for therapy. In the *Phaedo*, on the other hand, the coexistence of a soul within a body is understood as a kind of

209 In what immediately follows I reiterate my arguments which question van der Eijk's earlier interpretation and which were originally published in Bartoš 2009a. In the meantime, van der Eijk 2011a has reflected upon my arguments, revised his position on this point, and added a number of valuable suggestions (some of which I shall discuss below).

210 E.g. Plato, *Phd.* 67d1–2; 82d9–83c3; *Phdr.* 250c4–6.

211 This was already convincingly demonstrated by Cambiano 1980, 90–93. In my opinion, rather than in Plato's accounts, a much closer analogy for the meaning of the term *oikos* in the Hippocratic passage may be found in the fragments of Democritus, where the body is called *skēnos* of ψυχῆ (Democritus, DK 68 B 223), and the soul itself is referred to as a dwelling of *daimōn* (DK 68 B 171).

212 *Vict.* 4.88 (Joly-Byl 220.1–5 = L. 6.642), trans. Jones.

213 Cf. Xenophon, *Cyrop.* 8.7.21 (ed. Marchant), Aristotle, fr. 10 (ed. Rose = Sextus Empiricus, *Adver. Phys.* 1.20–21).

disease,²¹⁴ and elsewhere the liberating of the soul from its body resembles healing and purification.²¹⁵

Comparing the Hippocratic passage with Pindar's fragment, we should not overlook the fact that Pindar does not speak about *psuchē* but about *eidōlon*, an expression obviously evoking Homer's concept of the eschatological soul, a shadow of man forever stored away in the underworld realm of Hades. Furthermore, unlike Pindar's 'image of life', which is sleeping 'while the limbs are active', the Hippocratic soul is explicitly said to be awake together with body in waking, and it is only 'the status of her activity' which changes in dreaming.²¹⁶

As argued in the previous discussion, the soul in *On Regimen* always moves within a body and depends on nutrition provided by the body, and there is no reason to presuppose that this conception would be different in book 4. That the picture here is consistent with that in the rest of the work is illustrated by a passage in chap. 93, where we read: 'Whenever in his sleep a man assumes (δοκῇ) he is eating or drinking his usual food and drink, it indicates a want of nourishment and a desire of the soul (ψυχῆς ἐπιθυμία)':²¹⁷ It is clear from the subsequent prescriptions that the shortage of nutrition was meant literally (not metaphorically as the lack of a kind of spiritual food) and that the soul was affected by it in sleep. Also the analysis of dreams 'contrary to the acts of the day' in chap. 88 suggests a very close connection of soul and body in dreams. The author advises 'treatment of the body', which is explained in the following way: 'For a disturbance of the soul has been caused by a secretion (ἀπόκρισις) arising from some surfeit (πλησμονή) that has occurred.'²¹⁸ Even though it is not specified in this passage where the secretion disturbing soul comes from, it is explicitly ascribed to the body in book 3 (chap. 71), where the nature of sleep is described within a discussion about the symptoms of men overpowered by food. Since this is probably the only passage in the whole treatise explaining the physiological nature of sleep, I quote it in full:

At the beginning of the surfeit they have fall upon them long and pleasant sleeps, and they slumber for a part of the day. Sleep comes to the

²¹⁴ Plato, *Phd.* 95d1–2; 105c2–4.

²¹⁵ Plato, *R.* 571d6–572b1. The absence of the notion of *katharsis* as the 'highest goal' of soul (cf. Plato, *Phd.* 67c) in the Hippocratic passage was already demonstrated by Palm 1933, 68.

²¹⁶ Cambiano 1980, 91.

²¹⁷ *Vict.* 4.93 (Joly-Byl 228.26–27 = L. 6.660), trans. Jones (modified).

²¹⁸ *Vict.* 4.88 (Joly-Byl 220.9–10 = L. 6.644), trans. Jones.

flesh (ὁ δὲ ὕπνος γίνεται τῆς σαρκός),²¹⁹ the blood dissolves, and the breath, diffusing itself, is calm. But when the body can no longer contain the surfeit, it now gives out a secretion inwards through the force of circulation, which, being opposed to the nourishment from food, disturbs the soul (ταράσσει τὴν ψυχὴν). So at this period the sleeps are no longer pleasant, but [the dreamer] is necessarily disturbed and assumes (δοκεῖν) that he is struggling. For as the experiences of the body are (ὅποια γὰρ τινα πάσχει τὸ σῶμα), so are the visions of the soul (τοιαῦτα ὁρῇ ἢ ψυχῇ) when sight is cut off. Accordingly, when a man has reached this condition he is now near to an illness. What illness will come is not yet known, as it depends upon the nature of the secretion and the part that it overpowers.²²⁰

The connection of the 'visions of soul' with the disturbances caused by the secretions of body originating from the surfeit of food is perfectly in line with the passage in chap. 88. Soul in sleep is disturbed by the condition of the body and the dream visions reflect it accordingly. When describing the dream experience, the author frequently speaks about the beliefs or assumptions (δοκεῖν) of the one who dreams,²²¹ and thus terminologically distinguishes dreaming reality from waking reality. Nevertheless, it is appropriate for 'a wise man' (τὸν φρονέοντα) not to throw away such an experience but rather to recognize or diagnose (ἐπιγνῶ) from the first signs (τῶν τεκμηρίων τὰ πρῶτα) in what condition his body is and to apply an appropriate therapy.²²² In the present case, from the fact that long pleasant sleeps have been replaced by unpleasant sleep accompanied by disturbing dreams one should diagnose that 'exercise is overpowered by food'²²³ and moderate one's regimen accordingly.

219 After the Greek mss. M and θ I read ὁ δὲ ὕπνος γίνεται τῆς σαρκός. Cornarius adds ὑγρανθείσης after σαρκός and most modern editors (including Littré, Jones and Joly with Byl) follow him. Jones translates: 'The sleep is the result of the flesh becoming moist...'. Joly and Byl read it 'Le sommeil provient de la chair humectée, le sang se répand...'. Without Cornarius' conjecture, I assume, the text does not suggest any causal explanation of the sleep.

220 *Vict.* 2.71 (Joly-Byl 202.34–204.8 = L. 6.610), trans. Jones (modified).

221 Cf. *Vict.* 4.89 (Joly-Byl 220.23 = L. 6.644, Joly-Byl 220.30 = L. 6.646, Joly-Byl 222.13 = L. 6.646, Joly-Byl 222.16 = L. 6.648, Joly-Byl 222.18 = L. 6.648, Joly-Byl 222.32 = L. 6.650, Joly-Byl 224.3 + 224.9 = L. 6.650, Joly-Byl 224.16 + 224.17 + 224.19 = L. 6.652), *Vict.* 4.90 (Joly-Byl 228.3 = L. 6.658), *Vict.* 4.93 (Joly-Byl 228.26 + 230.1 = L. 6.660).

222 *Vict.* 2.71 (Joly-Byl 204.8–10 = L. 6.610). Cf. *Vict.* 4.86 (Joly-Byl 218.3–4 = L. 6.640), trans. Jones: 'He who has learnt aright about the signs (περὶ δὲ τῶν τεκμηρίων) that come in sleep will find that they have an important influence upon all things.'

223 *Vict.* 2.71 (Joly-Byl 202.33–34 = L. 6.610).

So far I have argued that even in sleep the dreaming soul depends on the nutrition delivered by the body, which influences the dream contents. How, then, shall we understand soul's 'independence' from body in dreams mentioned in chap. 86? In what sense is the soul 'her own mistress' (αὐτῇ ἐωυτῆς)?²²⁴ The activities performed during the waking state by soul together with body are specified as seeing, hearing, touching and walking. The same activities are said to be performed solely by the soul in dreams, as already mentioned for the activity of seeing in chap. 71, where dreams are presented as 'visions of the soul when sight is cut off'. Similarly in chap. 86, dreaming is conditioned by the fact that 'the body when asleep has no perception'. The activities of seeing, hearing, touching and walking are normally connected with certain sense organs or limbs, which are the components of the human body. Since these organs are not active in sleep, the dreaming soul comes to perform these activities independently of the sense organs and the inactive limbs, i.e. relatively independently from the body understood as the organic arrangement specific to each biological species and individual gender.²²⁵ But concerning the body as a source of nourishment of the soul, nothing whatsoever in the passage suggests that the nutritive bond between soul and body is broken during sleep.²²⁶

224 Hulskamp 2008, 179–181 in this connection points to a passage in the sixth book of *Epidemics* (*Epid.* 6.8.9–10, Manetti-Roselli 174.2–8 = L. 5.346–348), which 'is strongly reminiscent of the beginning paragraph of *On Regimen* IV' and reads (in her translation) as follows: 'Things in sleep: dreams, circumstances in which and because of which one goes to bed, and the meditation of the intellect on its own (καὶ τῆς γνώμης, ξύννοια, αὐτῇ καθ' ἑωυτῆν): separate from the sense organs and physical activity it worries, is happy, does and does not fear, hopes and despairs, like Hippothoos' servant, who, while her intellect was on its own (τῆς γνώμης αὐτῆς καθ' ἑωυτῆν), was aware of the things that happened during her illness...'. Although in *Epidemics* we read about γνώμη that is 'on its own' in sleep and can be disordered (*Epid.* 6.8.5, Manetti-Roselli 164.5–7 = L. 5.344: ἡ γνώμη ταρασσεται), whilst in *On Regimen psuchē* is disturbed in dreams (ψυχῆς τινα ταραξιν σημαίνει) and soul or διάνοια is 'on its own' during sleep, both authors express more or less the same idea. Galen in his commentary of the sixth book of *Epidemics* 'seems to identify γνώμη with the soul—Pfaff's translation of Galen's commentary reads 'Seele'—which brings paragraphs 9 and 10 from *Epidemics* VI and paragraph 86 from *On Regimen* IV even closer' (Hulskamp 2008, 180 n. 61).

225 Even on this meaning, it is only a partial independence of the bodily structures, for in sleep as well as in waking the soul remains in the body and moves around it, supposing that thinking and reflection depend on the movement of the soul within certain bodily orbits or passages. As the passage in chap. 71 discussed above conveniently reveals, soul can be disturbed in sleep by the surfeit of the body so that one 'thinks' that (s)he is struggling.

226 A similar argument has been presented already by Peck 1928, 73–74.

Let me conclude with a comparison of the Hippocratic account with Plato's body-soul dualism and summarize the main features differentiating the two conceptions. In Plato's *Phaedo* (a) soul and body belong to different orders of reality or different ontological 'worlds' (b) soul is separable from body and capable of an independent existence; (c) the relationship of soul and body is rather hostile and their junction pathological. The earthly connection of the two is understood as a kind of disease which is cured only by the release of the soul out of the body at the moment of death, for which every philosopher should be preparing all his life by releasing and separating his soul from the body.²²⁷ Contrary to this, in *On Regimen* (a) both body and soul are mutually interdependent in the same way as are fire and water; (b) under specific conditions (e.g. in dreaming) soul is separable from body in its activities, but it can neither be separated from the nutrition supplied by body nor can it leave the bodily structures and passages through which it moves;²²⁸ and (c) the relationship between soul and body is based on co-operation and mutual interdependence. Any disorder between the body and soul is rendered as pathological, and the aim of any therapeutic intervention is to restore their co-operation.

2.5 *Seed, Embryology, Procreation*

As already mentioned, the author of *On Regimen* often uses the expression *psuchē* to denote certain animating and organizing aspect of seeds or embryos. In this section I shall focus on the process of generation in closer detail with the aim of revealing certain features of the theory in *On Regimen* which are not dissimilar to the core of the so-called Orphic-Pythagorean notion of soul, i.e. the idea of the pre-existence of human soul which transmigrates across individual lives.

In the second chapter I have discussed the account of chap. 4 introducing the principle that 'of all things nothing perishes, and nothing comes into being that did not exist before', and that 'things change merely by mingling and being separated'.²²⁹ Accordingly, there is no place for a fresh beginning in existence in the Hippocratic theory and therefore even a 'new life' for any individual

227 E.g. Plato, *Phd.* 67d, 80e–81a.

228 Cf. van der Eijk 2011a, 269: 'Thus it is possible to read *On Regimen* as a consistent account of the soul and its *varying* relationship to the body, and there is no incompatibility between the account of ch. 86 and that of chs. 35–36. There is a difference of subject-matter, and as a result there is a difference of emphasis or perspective, but not a difference of doctrine.'

229 *Vict.* 1.4 (Joly-Byl 126.26–28 = L. 6.474), trans. Jones.

must be interpreted in terms of the mingling of previously existing parts.²³⁰ In order to learn more about the history of these pre-existent parts we have to turn to the passages in chapters 6, 7 and 25 claiming that human souls, the germs of new organisms, enter living individuals from outside. To exclude the possibility that these passages describe the biological process of the impregnation of a woman by a man's sperm, I will first quote the beginning of chap. 25:

The human soul, as I have already said, which possesses a blend of fire and water, and the parts of a human, enter into (ἐσέρπει) every animal that breathes, and in particular into every human, whether young or old. But it does not grow equally in all; but in young bodies, as the revolution is fast and the body growing, it catches fire (ἐκπυρουμένη), becomes thin and is consumed for the growth of the body; whereas in older bodies, the motion being slow and the body cold, it is consumed for the lessening of the human. Such bodies as are in their prime and at the procreative age can nourish it and make it grow. Just as a potentate (δυνάστης δὲ ἄνθρωπος) is strong who can nourish very many people, but is weaker when they desert him, even so those bodies are severally strongest that can nourish very many souls, but are weaker when the souls have departed.²³¹

Let me begin with the last sentence, which confused Jones and compelled him to ask in his note: 'To what does it refer? And how can a body nourish many souls?'²³² Joly answers him that here the *psuchai* correspond to 'sperm emissions',²³³ which is an appropriate answer, at least for this sentence. But in the preceding text we also have to consider that human sperm develops

230 According to the account of fire and water in chapters 3–5, the suggestion made by Jouanna 1999, 408 that 'birth is only a reuniting of elements and death a separation of these elements' is rather misleading. Gundert 2000, 17 in her attempt to reconstruct the whole process of generation suggests that 'according to *Regimen*, life begins when secretions from the two parents, each consisting of mixture of fire and water, unite in the uterus'. Although some passages in chapters 26–29 might suit this interpretation, others condemn it as unsatisfactory, oversimplified or even misleading, as I will argue in the next paragraphs. To reveal the most serious objection, we shall ask: What kind of life begins, according to Gundert? Although in our modern view new life begins in the moment of the unification of sperm and ovum (i.e. 'parental seeds' in *On Regimen*), after a closer inspection of the first chapters of book 1 this turns out not to be the story of the Hippocratic author.

231 *Vict.* 1.25 (Joly-Byl 142.6–17 = L. 6.496–498), trans. Jones (modified).

232 Jones 1931, 263 n. 2.

233 Joly 1960, 77, Joly 1967, 20 n. 2.

only in the body of an adult and fertile male (and a similar process has to be presupposed in the female body as well), which reveals very clearly the difference between the underdeveloped seed called 'human soul' entering into all animals, and the fully developed sperm maturing only in the right place at the right time.

Joly realizes the possible resemblances between this idea in *On Regimen* and the Orphic accounts and, considering the idea that the soul of a human enters into every animal, he declares that we are 'far away from *metensōmatōsis*'.²³⁴ He explains the fact that *psuchē* can enter all animals by pointing to the passage in chap. 28, which we have already discussed, where it is posited that 'soul is the same in all ensouled beings'.²³⁵ But this can neither ensure us that we are far away from *metensōmatōsis*, nor does it explain why it is explicitly a human soul (ψυχὴ τοῦ ἀνθρώπου) which enters all animals. Joly seems to believe that the whole of chap. 25 (as well as chapters 6 and 7) speaks about biological insemination and embryological development. If we concede that the author speaks about *psuchē* as *sperma* at the beginning of our passage with the same meaning as at the end of it and in the subsequent chapters, where it evidently means man's sperm, we are faced with very bizarre consequences. First, we must acknowledge that according to the author man's sperm enters not only women of all ages, but also all men. Considering the frequency of homosexual encounters in Greco-Roman antiquity, we should not exclude this possibility, but there is no satisfactory explanation for the fact that man's sperm further develops in the mature and fertile bodies of these male recipients. And second, an even more bizarre consequence rests in the claim that the sperm should enter all animals. A zoophilia was quite rare and definitely not a generally accepted part of Greek daily life, and it seems to be hardly imaginable that zoophilia should be practiced with 'all animals'.

On my reading, our passage describes a distinct early stage in the development of the seed.²³⁶ This stage precedes the conjunction of the parental seeds and the subsequent embryological development that follows from this conjunction. Since nothing completely new can come into existence, there

²³⁴ Joly 1960, 75.

²³⁵ *Vict.* 1.28 (Joly-Byl 144.16 = L. 6.500).

²³⁶ As far as I know, the difference between these two stages of seed's growth has been overlooked by most commentators, with the exception of Peck 1928, 90, who divides the ontogenetic stages as follows: (1) the growth from a seed up to a matured sperm which moves its position; (2) under certain conditions two parental seeds commingle into an embryo which grows in woman up to the moment of birth; and (3) the development of the organism after birth.

are many different kinds of seed of plants and animals already pre-existing in our surroundings. The idea that these seeds enter a human from outside was already discussed in chap. 6, where we read:

All other things are set in due order, both the human soul and likewise the human body. Into a human enter (ἐσέρπει) parts of parts and wholes of wholes (μέρεα μερέων, ὅλα ὅλων), containing a mixture of fire and water, some to take and others to give.²³⁷

The connection between what enters a human from outside ('parts of parts and wholes of wholes') and 'the soul of a human' is very loose in this passage, but it becomes much clearer later in the text. So far it seems that whatever enters a human can be described as 'parts' organized in relative 'wholes', no matter whether we speak about human seed, other seeds or any parts of our nutrition.²³⁸ The emphasis here is on the fact that all these parts *have* a mixture of fire and water. Soul has to have its own parts as well, as we read later in chap. 6, where it says that 'each individual soul, having greater and smaller parts' needs some suitable space to grow²³⁹ and also some suitable soul to join with. This is, I suppose, the reason why human soul cannot grow in other animals, as we read in the following explanation: 'For the suitable joins the suitable, while the unsuitable wars and fights and separates itself. For this reason the human soul grows in a human, and in no other [animal]. It is the same with the other large animals.'²⁴⁰ Although it is not exactly clear what the author has in mind when restricting his account only to 'large' animals, the explanation concerning the necessary conditions for further development are obvious: the soul of a human (i.e. soul having certain parts of human body) can grow only in humans and not in any other animals because soul's parts need appropriate conditions for the further development specific to humans, and the same should hold for the seeds of other ('large') animals. It is thus understandable why in the next chapter the author begins with a restriction: 'I shall say nothing

237 *Vict.* 1.6 (Joly-Byl 128.24–130.1 = L. 6.478), trans. Jones (modified).

238 The general (but nowhere in the *Corpus Hippocraticum* repeated) figure 'parts of parts and wholes of wholes' opens a possibility of two expository perspectives: (1) either we can see and describe anything from the bottom up, from parts towards the unity they compose and higher unity of that unity, or (2) we can begin with any natural whole and discuss its parts and parts of its parts. This is what I coined 'methodological mereology' in the previous chapter (see p. 162).

239 *Vict.* 1.6 (Joly-Byl 130.8–10 = L. 6.478).

240 *Vict.* 1.6 (Joly-Byl 130.13–16 = L. 6.480), trans. Jones (modified).

about the other animals, confining my attention to humans'.²⁴¹ In the following sentence we find the same idea as at the beginning of chap. 25,²⁴² in slightly different wording:

Into a human there enters (ἐσέρπει) a soul, having a mixture of fire and water, and the parts of a human body (μέρεα δὲ σώματος ἀνθρώπου).²⁴³ These, both female and male, many and of many kinds, are nourished and increased by human diet. Now the things that enter must contain all the parts.²⁴⁴

The condition that any specification of soul ('human soul', 'female' or 'male' in our case) always rests in some body is satisfied here by the presence of 'the parts of a human body' entering humans together with the soul. The fact that there are many human souls of both genders entering into our bodies, together with the supposition that they 'have' a mixture of fire and water, provides the possibility to control (at least in terms of probability) the gender of the offspring by dietetic regulations applied by both parents. This topic is discussed in chap. 27, where, on the assumption that females incline to water and males to fire, the following regimen is suggested: 'So if a man wants to beget a girl, he must use regimen inclining to water. If he wants a boy, he must live according to a regimen inclining to fire. And not only the man must do this, but also the woman. For growth belongs not only to the man's secretion (ἀποκριθέν), but also to that of the woman'.²⁴⁵ As far as I understand it, the suggested regimen may support the growth of the female seeds at the expense of the male seeds (or *vice versa*) in the bodies of both parents, but are unable to change the gender of any single seed, because this is predestined already before the seed enters the human body.

We may now reconstruct the two stages of the growth of human seeds (or souls) as follows: The first stage begins with the entering of the human seeds (soul together with the 'parts of a human body') into all animals including humans from outside, probably along with nutrition or air or both. Although this is happening all the time, as long as the animals feed and breathe, the

²⁴¹ *Vict.* 1.7 (Joly-Byl 130.18 = L. 6.480), trans. Jones (modified).

²⁴² Cf. *Vict.* 1.25 (Joly-Byl 142.6 = L. 6.496): 'as I have already said'.

²⁴³ Instead of the manuscript reading μοῖραν (M, θ) I adopt here Fredrich's emendation μέρεα δέ supported by the Latin translation in manuscript P: *membra*, and paralleled in *Vict.* 1.25 (Joly-Byl 142.7 = L. 6.496): μέρεα δὲ ἀνθρώπου.

²⁴⁴ *Vict.* 1.7 (Joly-Byl 130.18–21 = L. 6.480), trans. Jones (modified).

²⁴⁵ *Vict.* 1.27 (Joly-Byl 144.2–5 = L. 6.500), trans. Jones.

human seeds cannot grow in any other animals because they cannot find a suitable environment for the growth of their parts there (and, accordingly, for the same reasons the seeds of other animal species cannot grow in humans), nor do they grow in bodies that are too young or too old, but only in men or women in their prime who are able to nourish them properly.²⁴⁶ They grow and develop in the bodies of fertile men and women until they fulfil their 'allotted portion' (ἐκπλήσῃ τὴν πεπρωμένην μοῖρην).²⁴⁷ At this moment, 'driven along... by force and necessity',²⁴⁸ an ejaculation in men or an analogous process in women transport the seeds 'into a larger space'²⁴⁹ and the first stage of the development is finished. If it happens that both the parental seeds (also called souls, parts, or 'secreted bodies')²⁵⁰ are emitted together to 'one place' and 'on one day in each month' (i.e. into the vagina of a potential mother in her fertile period),²⁵¹ they commingle together into one fire-water mixture, and if they 'achieve the correct attunement',²⁵² the second developmental stage described in chapters 9, 10 and 26 can begin and continue for the next seven to nine months until the foetus is ready to be born.²⁵³

2.6 *Transmigration and the Cycle of Life*

So far I have argued that, according to the author of *On Regimen*, human souls (i.e. ensouled seeds, or souls together with some bodies which make them 'human') pre-exist in our environment. When we ask about the origin of the everlasting seeds of human beings, there is no explicit specification in the treatise as to where these 'human souls' come from. But there is one remarkable passage in book 4 which suggests a possible answer and allow us to move towards an explanation in terms of transmigration. In chap. 92 the author interprets dreams in which dead people appear. He claims that when we dream about receiving something clean (καθαρόν) from them, it indicates both 'health of the body and the healthiness of the things that enter it'.²⁵⁴ The explanatory basis for this interpretation is striking: 'For from the dead come nourishment, growth and seed, and for these to enter the body clean indicates

246 Cf. *Vict.* 1.25 (Joly-Byl 142.8–17 = L. 6.496–498).

247 *Vict.* 1.8 (Joly-Byl 132.3–4 = L. 6.482), trans. Jones.

248 *Vict.* 1.8 (Joly-Byl 132.3–4 = L. 6.482).

249 *Vict.* 1.8 (Joly-Byl 132.2–3 = L. 6.482). This presupposes that the female seed initially develops in some other place than the womb. Cf. *Hippocratic Genit.* 4 (L. 7.474.16–18).

250 *Vict.* 1.28 (Joly-Byl 144.20 = L. 6.502): τὰ σώματα <τὰ> ἀποκριθέντα.

251 *Vict.* 1.27 (Joly-Byl 144.7–14 = L. 6.500).

252 *Vict.* 1.8 (Joly-Byl 132.6–8 = L. 6.482).

253 *Vict.* 1.26 (Joly-Byl 142.24–26 = L. 6.498).

254 *Vict.* 4.92 (Joly-Byl 228.12–14 = L. 6.658), trans. Jones.

health'.²⁵⁵ Now my speculation goes as follows: Supposing that (1) 'growth' as well as *psuchē* were closely connected with 'the hottest and strongest fire' in chap. 10, and 'nourishment' is in the elemental theory represented by water; that (2) all seeds have a mixture of fire and water; and (3) that the potency of growth and further development of human seeds is commonly associated with *psuchē* in the treatise, we can conclude that the seeds (σπέρματα) in this passage are in principle the same as the seeds (i.e. souls with 'parts of body') entering a human from outside together with nutrition or air.²⁵⁶

Accordingly, I believe that the Hippocratic account of soul and seeds presented here implicitly presupposes some version of a theory of transmigration comparable to what is traditionally called *metensōmatōsis* or *metempsuchōsis*.²⁵⁷ But since these expressions were often employed in late antiquity to label a specifically Platonic theory of reincarnation, I would prefer to use another name for the Hippocratic version of the concept. A convenient candidate is the expression *palingenesis*,²⁵⁸ which is derived from Plato's description of an 'ancient doctrine' in *Phaedo*, according to which the living are born again from the dead (πάλιν γίγνεσθαι ἐκ τῶν ἀποθανόντων τοὺς ζῶντας).²⁵⁹ If my reconstruction of the Hippocratic account is right, the seeds originate from the dead, enter living animal bodies and under certain conditions revive (literally 'are kindled into flame', ζωπυρέονται)²⁶⁰ into new individuals, which seems to be very similar concept to the 'ancient doctrine' mentioned by Plato.

255 *Vict.* 4.92 (Joly-Byl 228.14–15 = L. 6.658), trans. Jones: ἀπὸ γὰρ τῶν ἀποθανόντων αἱ τροφαὶ καὶ αὐξήσεις καὶ σπέρματα γίνονται· ταῦτα δὲ καθαρὰ ἐσέρπειν ἐς τὸ σῶμα ὑγ<ι>εῖν σημαίνει.

256 It is probably significant that the unusual verb ἐσέρπειν, used in chapters 7 (*Vict.* 1.7, Joly-Byl 130.18 = L. 6.480) and 25 (*Vict.* 1.25, Joly-Byl 142.7 = L. 6.498) in connection with ψυχή entering human body, is repeated in our passage in connection with σπέρματα.

257 According to Olympiodorus (*In Plat. Phaed. com.* 9.6.5–6, ed. Westerink), both terms are synonymous.

258 The expression *palingenesis* was also occasionally used to denote Plato's doctrine. However, some scholars (e.g. Cumont 1923, 182 or Stettner 1934, 3–4) suggest a terminological difference between Plato's *metempsuchōsis* and the *palingenesis* associated with Pythagoras.

259 Plato, *Phd.* 70c, ed. Burnet. Cf. Plato's *Men.* 81b3–6, ed. Burnet, trans. Grube (modified): 'They [i.e. certain priests and priestesses, Pindar and many other poets] say that the human soul is immortal; at times it comes to an end, which they call dying, at times it is reborn (πάλιν γίγνεσθαι), but it is never destroyed...' See also Parmenides DK 28 B 13 suggesting that souls are sent 'from the visible into the invisible and back again (ἀνάπαλιν)'.

260 *Vict.* 1.29 (Joly-Byl 146.14 = L. 6.504); see also 1.9 (Joly-Byl 132.14 = L. 6.482).

These considerations might give the impression that we are already too far away from the original physiological account of human nature introduced in the first chapters in book 1. But if we recall what is said in the second part of chap. 4 and in chap. 5, we find that the theoretical considerations concerning the nature of life and death are perfectly consistent with the concept of *palin-gensis*. Chap. 4 introduces the idea that the common belief of men in ‘perishing’ and ‘coming into existence’ is wrong and that in reality things merely change by mingling and being separated. The same idea is further developed in chap. 5 in a way that has important consequences for our discussion in two respects. Firstly, the traditional eschatological realm of death associated with Hades is understood as an invisible complement of ‘this world’, the realm of visible phenomena (‘light of Zeus’).²⁶¹ Drawing on the conventional ideas, the distinction between being and not-being is transformed into the contrast between the visibility and invisibility of certain everlasting entities consisting of fire and water. It is supposed to be only a wrong belief among men who ‘trust their eyes rather than their mind’ that things originate and perish, but in reality things come to light from Hades (i.e. invisibility) and disappear from the light to Hades.²⁶² And secondly, the repeated statement that ‘the things of the other world [i.e. Hades] come to this, and those of this world go to that’ is exactly the essence of the ‘ancient doctrine’ described in Plato’s *Phaedo*.

We can suppose that both Plato and the author of *On Regimen* draw on a common heritage, but we should not overlook the fact that they deal with it in a significantly different way and use it for very different purposes. First, *On Regimen*’s version of transmigration presupposes some sort of immortality of certain ensouled ‘parts’ of body, or seeds, or souls,²⁶³ which are, in contrast to the Platonic account, physical and corporeal in the same way as any other parts of the body. Accordingly, what is described in *On Regimen* is not an immaterial, bodiless soul entering its new body, but a seed as a soul-body unity²⁶⁴ entering all kinds of animal bodies, which can under very specific conditions become

261 *Vict.* 1.5 (Joly-Byl 128.15 = L. 6.476).

262 *Vict.* 1.4 (Joly-Byl 126.28–128.2 = L. 6.474). Cf. Parmenides DK 28 B 13: ἐκ τοῦ ἐμφανοῦς εἰς τὸ ἀειδέξ.

263 One has to admit that nowhere in the treatise is this presupposition clearly spelled out. But it should be also mentioned that the theory of transmigration has practically no relevance to the dietetic practise, which may explain the author’s silence on that part of the theory. In any case, it is remarkable indeed that the author presupposes that his readers are familiar with, and consent to, such a cosmological framework.

264 Since the soul is said to be the same in all ensouled beings (*Vict.* 1.28, Joly-Byl 144.16 = L. 6.500), it is rather the particular bodily parts which represent the ‘element of stability’, as Peck 1928, 87 puts it, opposed to the constant flux of the body as a whole.

suitable providers of nutrition for the further development of the seed and which thus become the biological parents of the 'new' arrival.

Secondly, Plato's account focuses mainly on death, the departure of the soul from the body and its existence after life.²⁶⁵ *On Regimen*, by contrast, displays little interest in these concerns (apart from the comments on the unity of life and death in chaps. 4–5, and discussion of dreams where the dead appear in chap. 92), being particularly concerned with life and health, reproduction and generation, and the growth and preservation of life within the limits of natural conditions, especially those relevant to the dietetic concerns. Accordingly, there is no place for speculations concerning the fate of individual souls before birth and after death,²⁶⁶ let alone the rewards or punishments which should follow according to one's individual merits or sins.

There is general agreement that Plato's concept of the transmigrating soul draws on some Orphic or Pythagorean sources, even though his own elaboration differs from them significantly.²⁶⁷ But do we have any reasons to believe that the author of *On Regimen* also reflects the same tradition? We must, I think, answer positively when we consider the following concurrences. Apart from Plato, the oldest authentic non-fragmentary evidence which explicitly says something positive about Orphic and Pythagorean notions of soul is found in the first book of Aristotle's *De anima*. In Plato's eschatological myths in the *Phaedo*, *Gorgias*, *Republic* and *Timaeus*, where the fate of the soul between two incarnations is discussed in striking detail, we find no specification there of how the immortal soul enters its new body. This is, by contrast, the only aspect of the theory of reincarnation that Aristotle discusses in his criticism of his predecessors. Assessing those 'who describe the soul as composed of the elements', Aristotle claims that 'the theory in the so-called

265 Cf. Burkert 1972, 185–186 who finds it 'striking how constantly attention is oriented towards the world of the dead, the heroes, and the δαίμονες' in the Pythagorean *accusmata*.

266 The identity of the transmigrating souls (or rather the seeds consisting of the soul and the parts of human body) is very problematic on the Hippocratic account, for every soul can combine with another soul (chap. 29) and can also be divided (chap. 16). Moreover, the features of man's character discussed in chap. 36 depend neither on the soul itself nor the parts of the body which are pre-existent in the seed, nor the mixture of fire and water common to both soul and body, but rather on the passages of soul in the fully developed organism, which implies that without one's specific bodily structure there is no place for one's personal identity. And it is probably needless to say that the moral tenet of Plato's version of the transmigration theory is unthinkable without such an identity.

267 Both Burkert 1962 and Huffman 1993 have already persuasively showed the difference between our oldest testimonies of Orphic and Pythagorean doctrines of soul and that of Plato, whose influence is often apparent in later doxographers.

poems of Orpheus . . . alleges that the soul, borne by the winds, enters from the universe into animals when they breathe.²⁶⁸ Similar ideas are also ascribed to some Pythagoreans who identify soul with the particles in the air,²⁶⁹ and to the 'Pythagorean myths', which suggest that it is possible 'for any soul to find its way into any body'.²⁷⁰

These general features of the Pythagorean and Orphic accounts of soul seem to be perfectly in line with the account in *On Regimen* when we consider that the Hippocratic author describes soul as an elemental composite (i.e. as a mixture of fire and water), supposes that it enters the human body from outside, possibly together with air, as suggests the specification that soul enters 'into every animal that breathes (ὅ τι περ ἀναπνεῖ)',²⁷¹ and holds that among the breathing animals practically any soul can enter any body (which of course does not mean that it can prosper and develop in any body). These parallels allow us to conclude that the Hippocratic author draws on theoretical assumption associated, at least by Aristotle, with the Pythagoreans or Orphics.

As result of this analysis, both authors seem to belong to the very first generation of thinkers who combined both diagnostic and therapeutic forms of *psuchē-sōma* opposition with the eschatological myths and the theory of transmigration.²⁷² In contrast to Plato's dualistic elaboration of the conception of transmigrating soul, which underlies his moralistic account of human nature, the Hippocratic text represents a non-dualistic version, which aims at explaining the generation and perishing of individual organisms within the everlasting cosmic cycle of life, without drawing out any moralistic consequence. As I will argue in the next section, moral aspects of the soul, which are essential in Plato's doctrine, seem to remain completely outside the dietetic scope of the Hippocratic treatise. This fits perfectly with the hypothesis formulated by Stettner and Burkert, according to which the earliest versions of the theory

268 Aristotle, *DA* 410b27–30, trans. Hett (modified).

269 Aristotle, *DA* 404a16–20. Cf. Burkert 1972, 183 referring to several variants of the conception that 'a soul emerges from a plant, or a bloom, to enter into a human body', with earliest testimony in Aeschylus, fr. 28 (ed. Mette).

270 Aristotle, *DA* 407b20–24, trans. Hett (modified).

271 *Vict.* 1.25 (Joly-Byl 142.7 = L. 6.496), trans. Jones.

272 It should be remarked on this occasion that Democritus, who employs the therapeutic version of the *psuchē-sōma* opposition comparable to the views of Socrates and Plato, did not include eschatology in his ethical philosophy and even warned about speculations about afterlife, as we can read in *DK* 68 B 297, trans. Taylor: 'Some people, ignorant of the dissolution of mortal nature, but conscious of their evil-doing in life, trouble their time of life with terrors and fears, inventing false tales about the fear after death.'

of transmigration were free from morality.²⁷³ Considering that the only non-fragmentary evidence supporting this hypothesis is to be found in Herodotus' report on the introduction of the theory of the wandering soul into Greece²⁷⁴ and in Aristotle's reports of the 'Orphic' and 'Pythagorean' accounts of soul in the first book of *On the Soul*, *On Regimen* therefore presents an extremely valuable piece of evidence, which, in some respects, is closer to the original eschatological views traditionally connected with the Orphics and Pythagoreans than to Plato's accounts.²⁷⁵

2.7 *Regimen without Morality*

The relation between ancient Greek medicine and philosophical ethics in the Classical era is a topic frequently discussed by classicists, historians of science and philosophers. Many of them have persuasively argued that certain aspects of ancient medicine and therapeutics were indispensable as a model for constructing philosophical ethics.²⁷⁶ As I have illustrated above, philosophers such as Democritus or Socrates (as far as we can rely on Xenophon's reports) employed a lot of dietetic thinking in their ethics, and in the next chapter I will also add some evidence for a similar approach in Plato and Aristotle. Considering the affinities of the two fields, it is possible to ask whether and in what sense the dietetic account of *On Regimen* is involved in ethics and moral matters.

M. Foucault, whose 'manual hypothesis' I have mentioned with approval in the first chapter, suggests that the main common concern of medical dietetics and philosophical ethics was to prepare the individual for 'a multitude of possible circumstances'.²⁷⁷ Foucault treats ancient regimen as an autonomous 'art of living' and describes it as 'a whole manner of forming oneself as a subject who had the proper, necessary, and sufficient concern for his body'.²⁷⁸ Concerning the ethical dimension of the Hippocratic dietetics (and *On Regimen* serves him as the most frequent point of reference), Foucault makes two statements presenting two different ideas: first, that 'preparing the individual for a multitude of possible circumstances' is a concern 'that was shared

273 Cf. Stettner 1934, 7–19 and 29–31, Burkert 1962, 111 n. 87.

274 Herodotus, *Hist.* 2.123 (ed. Legrand).

275 As for Philolaus, to whom Plato refers in *Phaedo* (61d6–7) and which is a good candidate for a common source for both Plato and the author of *On Regimen*, see below, pp. 227–228.

276 Cf. Jaeger 1944, 3–45 and 1957, Lloyd 1968, Lidz 1995, Moes 2001. See also more general studies of Pigeaud 1981 and Nussbaum 1986.

277 Foucault 1990, 106.

278 Foucault 1990, 108.

by ethics and medicine',²⁷⁹ and second, that ancient regimen in general made the major or common activities of existence 'a matter both of health and of ethics'.²⁸⁰

While the first thesis is perfectly in line with the account of *On Regimen* and represents probably the most valuable contribution of Foucault's analysis to the discussion of the relation between ancient medicine and philosophical ethics, the second is rather problematic and runs the risk of misleading the reader if not properly clarified. Expressions like 'ethics' or 'morality' are ambiguous and Foucault uses them (possibly intentionally) in a very broad sense.²⁸¹ Since it is not my intention to discuss in detail Foucault's own concepts, I will concentrate on the dietetics in *On Regimen* and its limitations concerning ethical problems. My aim is to suggest that matters of morality and value judgement are clearly distinguished on several occasions from matters of health in the Hippocratic text.

The author occasionally suggests that something is good or bad, although, as a rule, this does not represent any moral judgement but rather signifies what is beneficial or harmful for health. He even speaks about a 'good soul' (ψυχὴ ἀγαθή) in chap. 35, which again does not signify its moral qualities but rather the favourable mixture of fire and water in terms of intelligence.²⁸² Concerning the moral categories of right and wrong, good and evil, these seem to be secluded from the dietetic account of human nature on methodological grounds.²⁸³ In chap. 11 the author contrasts the realm of *phusis* with the sphere of human customs and conventions as follows:

For custom and nature (νόμος γὰρ καὶ φύσις), by means of which we accomplish all things, do not agree though they do agree (οὐχ ὁμολογεῖται ὁμολογεόμενα). For custom was settled by men for themselves without their knowing those things about which they settled the custom; but the nature of all things was arranged by the gods (φύσιν δὲ πάντων θεοὶ διεκόσμησαν). Now that which men arrayed never remains constant,

279 Foucault 1990, 106.

280 Foucault 1990, 108. A similar view has been proposed already by Schumacher 1963, 58 who holds that *diaita* 'bezeichnet ganz allgemein die Lebensweise eines Menschen, dann aber auch die Anordnung dazu, und zwar in ethischer und physischer Hinsicht.'

281 Foucault 1990, 25–32.

282 *Vict.* 1.35 (Joly-Byl 154.13–21 = L. 6.518).

283 An indirect proof of such a strategy is to be found already in chap. 2, where various aspects of *phusis* which need to be known in order to treat human regimen are discussed, but nothing is said about human conventions, generally acceptable behaviour, laws and other features of social life commonly discussed in the philosophical ethics.

whether right or wrong (οὔτε ὀρθῶς οὔτε μὴ ὀρθῶς); but whatsoever things were arranged by the gods always remain right (αἰεὶ ὀρθῶς ἔχει). So great the difference between the right and the wrong (καὶ τὰ ὀρθὰ καὶ τὰ μὴ ὀρθὰ τοσοῦτον διαφέρει).²⁸⁴

At first sight such a claim may give the impression that, apart from supplying another example of the unity of opposites, it neither fits the context of *phusis-technē* analogies nor introduces anything important for the dietetic discussion. Why should the author play down the role of human conventions and introduce them as unstable and unreliable in comparison with natural processes? I can see at least two possible motivations: an epistemological one and a dietetic one. The epistemological reason for elevating the natural order over human conventions is introduced in chap. 4 in connection with the current belief among men concerning how things generate and perish. In this sense 'custom is opposed to nature', for according to nature there is no generation and corruption but, rather, mingling and separation.²⁸⁵ By contrasting conventional views about being and non-being with an understanding of the natural order, the author at the same time establishes the priority of the mind over the senses ('they trust eyes rather than mind . . . but I use mind . . .'),²⁸⁶ which enables him to set his account within a specific metaphysical framework.

As for the dietetic motivation, we can begin by considering that our daily life activities and dietetic habits are, as a rule, arranged in accordance with conventions. We do what others do, we eat and drink what and when others eat and drink, we sleep when and as much as others do, etc. Dietetic therapy, on the other hand, aims at changing our customary regimen according to our individual disposition and needs, which can considerably differ from the dispositions and needs of others. It is therefore useful to undermine the status of dietetic conventions in order to open up our daily-life regimen to deliberate choice. Accordingly, in chap. 11 the author reformulates the polarity of right and wrong as it is employed and commonly understood in social and political affairs into a value-neutral discourse that is more appropriate for the dietetic purposes. In chap. 24, which closes the excursion into the *phusis-technē* analogies, the instability and arbitrariness of human value judgements is illustrated with several examples. Athletic trainers are presented as those who teach how to 'transgress the law according to law' (παρὰ νόμον κατὰ νόμον), how to 'be unjust justly' (ἀδίκειν δικαίως) and how to 'deceive, to trick, to rob, to do the foulest violence

284 *Vict.* 1.11 (Joly-Byl 134.26–136.4 = L. 6.486), trans. Jones.

285 *Vict.* 1.4 (Joly-Byl 126.26–128.11 = L. 6.474–476).

286 *Vict.* 1.4 (Joly-Byl 128.1–3 = L. 6.474–476).

most fairly' (ἐξαπατάν, κλέπτειν, ἀρπάζειν, βιάζεσθαι, τὰ αἰσχίστα [καὶ] κάλλιστα). Everyone who does not do these things is judged as 'bad' (κακός), while those who do are called 'good' (ἀγαθός). And this is, according to the author, a proof of the stupidity of the many (ἐπίδειξις τῶν πολλῶν ἀφροσύνης). They 'behold these things and judge one man out of all to be good and the others to be bad'. The passage on trainers concludes with another critical remark on the crowd of ignorant people who stand in opposition to the few who understand: 'Many admire, few know' (πολλοὶ θαυμάζουσιν, ὀλίγοι γινώσκουσιν).²⁸⁷

The next activity on the list illustrates the immorality of commonly accepted social behaviour related to trade and business: 'Men deceive when they buy and sell, he who has deceived most is admired'. Also when drinking and raving, 'they do the same things: they run, they wrestle, they fight, they trick, they deceive; one out of them all is judged'. Similarly actors in a theatre deceive the audience by 'saying one thing and thinking another', by acting as someone else and thus being 'the same person yet not the same'. There is probably nothing deplorable when such things happen on the stage, for even an experienced audience (εἰδότης) is deceived by actors, but when people adopt the same habits in real life ('a man too can say one thing and do another, he may now be of one mind, now of another'), a criticism is appropriate and justifiable.²⁸⁸

Apart from these two passages, the author also seems to intentionally avoid moral judgements, as well as advice which may end up in conflict with common morality, in his concrete dietetic prescriptions. A good example of such a strategy is to be found in chap. 88, where he interprets dreams which are contrary to waking experience. Whenever we dream about some fight or quarrel (ἢ μάχη ἢ νείκεα), it indicates 'disturbance in the body', and the more violent the dream struggle is, the more serious are the problems indicated in the body. The author clearly asserts that he does not decide (οὐ κρίνω) whether the act should be averted or not, i.e. that we should follow the dream as an instruction in social matters, but rather advises 'treatment of the body'.²⁸⁹

This strategy can have an additional and so to speak external reason. We have seen in the earlier sections of this chapter that there were ethical philosophers claiming expertise in improving the soul by giving advice on how to save the soul from suffering and by helping improve one's social skills and, in general, lead a morally good life. In contrast to that, the Hippocratic manual for dietetic care focusses only on specific soul capacities such as the soul's intelligence, memory and sense perception. These are due to the blending of fire

287 *Vict.* 1.24 (Joly-Byl 140.24–28 = L. 6.496), trans. Jones.

288 *Vict.* 1.24 (Joly-Byl 140.28–142.4 = L. 6.496), trans. Jones (modified).

289 *Vict.* 4.88 (Joly-Byl 220.5–9 = L. 6.642–644), trans. Jones.

and water and can therefore be moderated by dietetic means, while there are also other psychic factors which are explicitly said to remain outside dietetic expertise. These are enumerated in chap. 36:

Of the following things, the mixture is not the cause, e.g. (οἶον) irascibility, indolence, craftiness, simplicity, quarrelsomeness and benevolence. Of all such things the nature of the passages (πόροι) through which the soul moves is the cause. People's mental activity (φρονέουσι) is determined by the kind of vessels through which the soul moves or against which it collides or with which ones it mixes. This is why it is not possible to change such things through regimen, for it is impossible to change invisible nature (φύσιν ἀφανέα). Likewise, what kind of voice one has is caused by the passages (πόροι) of the breath; for the voice has to be of the nature of the vessels (τῶν πόρων) through which air moves and the things against which it collides. And this (the voice) one can make worse or better, since one can make the passages (τοὺς πόρους) of breath smoother or rougher, but the above is impossible to change by regimen.²⁹⁰

The features which are listed as incurable by regimen can be understood as examples of moral dispositions or ethical character. The use of the pronoun οἶον suggests that these are only examples, not an exhaustive list,²⁹¹ introduced in pairs presenting a positive feature and its counterpart. The analogy with the voice is not very illuminating, for it remains unclear why it is possible to influence the passages of air, on which the character of voice depends, while it is impossible to influence the passages of soul. The explanation that it is impossible to change invisible nature is of little help,²⁹² and no other clue is given in the text. A number of possible explanations for this passage have been suggested,²⁹³ but none of them seems entirely satisfactory. In any case,

290 *Vict.* 1.36 (Joly-Byl 156.23–32 = L. 6.522–524), trans. van der Eijk.

291 Cf. van der Eijk 2011a, 266.

292 Cf. van der Eijk 2011a, 267: 'This is an enigmatic phrase, which does not seem to receive elucidation from other passages in the work where there is talk of knowledge of the invisible (chs. 11 and 12).'

293 Cf. Heidel 1914, p. 162: 'The φύσις ἀφανής is of course the ψυχή. Since we may not deal with it directly, we must, our author says, approach it indirectly, by changing the πόροι through which the ψυχή operates. . . . That the author here uses the voice as an illustration to elucidate the influence of the πόροι on the state of the ψυχή is due to the fact that the voice depends on the breath (πνεῦμα), with which our author, as does the author of *Περὶ ἐβδომάδων*, 13, intimately associates ψυχή (cp. c. 25).' Jones 1931, 295, n. 1: 'We can change the πόροι (throat, nose) that give characteristics to voice, but we cannot get at the internal

it is more important for the present discussion that the author clearly asserts that certain features of man's character are incurable by dietetic means, which implies that influencing one's moral disposition remains outside the expertise of a dietician. This is, I suggest, a deliberate decision of the author, in comparison with which the concrete physiological explanations are rather circumstantial. Whilst aiming at establishing his authority in matters concerning regimen, health and the related physiologically determined capacities of man, including intellect and memory, he recognizes other fields of expertise which he distinguishes from his own. These fields border upon dietetics and share with it some common features, but they build on different principles and follow different goals, such as, for example, the art of divination (μαντική τέχνη) discussed in chap. 12, and more specifically the interpretation of divine dreams introduced in chap. 87, or gymnastic training (παιδοτριβή) mentioned in chaps. 13 and 24. Accordingly, the specification of various features of man's character that cannot be cured by the art of dietetics, which appears at the very end of the account of human nature in book one, can and should be read as a clear demarcation of competences between dietetics on the one hand and those fields of expertise which claim to care for man's moral and political character on the other.

Conclusion

The aim of this chapter has been to introduce *On Regimen* as a unique piece of evidence in the history of pre-Platonic notions of soul. In order to set the treatise within an appropriate historical context, I began by outlining the dramatic development of the concepts of soul and body in the time between Homer and Plato and introduced several examples of how early writers distinguished bodily and psychic aspects of human nature without employing the

πόροι along which ψυχή travels'. Van der Eijk 2011a, 267–268: 'Perhaps he [i.e. the author of *On Regimen*] means that it is not clear *how* the nature of these passages affects mind and character: even if we know that it does, the mechanism through which it does so remains obscure and hence is not accessible to dietetic treatment. Another possibility is that he is thinking primarily, if not exclusively, of treatment by regimen: if you want to change someone's character or psychological disposition, diet is not enough to change your 'passages', you need more aggressive drugs or perhaps even the surgeon's knife! Another, perhaps more plausible reading is that these psychological features or states not caused by the mixture of fire and water are somehow less closely associated with the body than others, and hence less, or even not at all, accessible to physical treatment.' See also Joly 1967, 35 n. 1 and Joly-Byl 2003, 262.

terminological *psuchē-sōma* opposition. I then turned to the authors of the fifth and the beginning of the fourth century BCE, who set *psuchē* and *sōma* in opposition to each other with *sōma* typically standing for the organic unity of living body and *psuchē* usually expressing cognitive, emotional and moral aspects of human individuals. I have argued that practically all of the authors who employed this opposition did so in contexts which have to do with some kind of therapy or care of man and that there were two remarkably different variants of the opposition. The first one, which I coined as the 'diagnostic' form, distinguishes psychic from bodily symptoms in diagnosing the individual human condition. This form was often used in a medical context, where, as far as our evidence can tell us, the therapy of the body was never opposed to the therapy of the soul. I called the second form of the opposition 'therapeutic', for different kinds of therapy were presupposed to be applicable to the soul and to the body. This attitude is attested for rhetoricians and philosophers, but never for physicians or medical authors, with the exception of one single passage in *On Regimen* (chap. 89), where it is suggested that soul disturbed by thoughts can be cured by watching comic and other pleasant things. In this passage the author seems to employ rather the 'therapeutic' form of *psuchē-sōma* opposition, for he recognizes at least one therapeutic technique specific to the treatment of the soul. But according to the general explanatory framework of this treatise, I have argued, every action of the soul is conditioned by the state of the body, and even watching a comedy, as well as any other act of perception and reflection, is always taken as a psychosomatic experience. It is, therefore, still possible to conclude that medical authors in general, including the author of *On Regimen*, either did not distinguish between body and soul at all, or they did so, especially for diagnostic purposes, but always treated man as a psychophysical unity.

The reason for laying stress on this particular aspect of the medical literature is to distinguish it from the view, commonly introduced by ethical philosophers, according to which the goal of philosophy is to look after the human soul, whilst the goal of medicine is restricted to the care of the human body. This schematic opposition between philosophy and medicine has only a little to do with the medicinal theories and practices of the time, but it was, I suggest, invented by philosophers themselves for the purpose of finding some generally acceptable positive definition of ethical philosophy. From this point of view it seems that no real physician would ever agree with defining his art as a care restricted to the body and having nothing to do with the soul, and terminologically speaking there is no literary evidence for such an attitude in the extant medical texts of the time. Despite this, there is a possible justification for the philosophical criticism of medical therapy, including the therapy

suggested in *On Regimen*, which can shed some light on the discussion concerning the boundaries between different fields of expertise, represented by medicine and medical dietetics on the one hand and ethical philosophy on the other. As my analysis has revealed, the subject of the dietetic care is always a concrete human individual, seen as a unity of body and soul. As concerns the psychological aspects of this unity, dietetics focusses on keeping our intellectual capacities in the best possible condition. For what purposes we shall use this best condition of our soul (e.g. how we behave in moral sense, how we carry out our family and professional duties, how we get along with our family members, fellows and neighbours, what we contribute to our society, what are our political attitudes) remains outside the scope of dietetics. The subject of dietetic care is psychosomatic, but neither social nor moral nor political. And this more or less holds in *On Regimen* as well as in other dietetic and medical texts of the time.

In contrast to this medical approach, philosophical ethics from the times of Democritus and Socrates often presents itself as a specific kind of care for moral, social and political aspects of human life. A discussion of these matters is hardly possible, it is implied, without consideration of the social aspects of health and disease. Conversely, without taking account of moral and political concerns it is impossible to integrate social aspects into a more complex conception of health and well-being. It was particularly such a deficiency of the medical approach to health, I suggest, which the ethical philosophers criticized as incomplete and insufficient. When Democritus says, for instance, that 'there is disease of household and of life, as well as of body',²⁹⁴ such a distinction can be found neither in medical dietetics nor in any other branch of medicine. Likewise Antiphon, when enumerating the troubles of life, speaks not only about those suffered 'for the sake of bodily health (ὕπέρ τε τῆς ὑγείας τοῦ σώματος)', but also those 'for the sake of honour (δόξης), prudence (σωφροσύνης), glory (εὐκλείας), and reputation (τοῦ εἰ ἀκούειν)'.²⁹⁵ Socrates, according to Xenophon, promises to enable his followers 'to discharge the various duties of life to house and family, to relatives and friends, to fellow-citizens, and to the state at large',²⁹⁶ which are important concerns taken into consideration by none of the physicians, dieticians or medical authors of the time. According to Diogenes Laertius, Socrates' pupil Aristippus, on being asked what he had gained from philosophy, replied: 'The ability to feel at ease in any

294 Democritus, DK 68 B 288, trans. Taylor.

295 Antiphon, fr. 49.21–24 (ed. Pendrick).

296 Xenophon, *Mem.* 1.2.48 (ed. Marchant).

society.²⁹⁷ Again, in this respect medical dietetics is unable to compete with the newly emerging therapeutic expertise called philosophy. Consequently, if there is any sensible explanation for the philosophers' criticism of medicine that cures body without soul, we should understand it in the sense that the philosophical concept of soul as the subject of care is, in contrast to the medical or dietetic concepts, also and most importantly the subject of moral and political responsibility.

In my interpretation, the author of *On Regimen* is well aware of these limitations of his art and attempts to make it clear that his dietetic manual does not aspire to be useful in forming one's character or in preparing anyone for the challenges of the social and political life. Accordingly, he adapts his aims and methods to these limitations and distances himself from judging problems connected with morality, laws and other human conventions, which are the domain of lawmakers, sophists, and, most importantly, of the ethical philosophers. On this reading, the Hippocratic text attests a developed discussion of the various approaches to taking care of the human condition, which leads the authors of the day to specify their expertise and define the goals and limitations that are appropriate to the field they represent.

The comparison of *On Regimen* with Plato's *Phaedo* revealed that both authors drew on earlier accounts of transmigration, often identified with the thought of Orphics and Pythagoreans, which Plato combined with the therapeutic version of the *psuchē-sōma* opposition, thus developing the already established practices of psychotherapy and moral philosophy in a new direction. Plato's moralistic elaboration of the Orphic-Pythagorean heritage can be understood as an original and historically extremely successful attempt to reinterpret the ultimate goal of philosophy,²⁹⁸ which overshadowed the earlier conceptions on which Plato drew as well as the alternative elaborations of the same tradition which flourished especially in the fourth century BCE. From this point of view, *On Regimen*, which attests a non-moralistic and non-dualistic version of transmigration, provides extremely valuable evidence that helps bridge the gap between Plato's idiosyncratic accounts on the one hand and the poorly preserved evidence of the pre-Platonic concepts of immortal soul and transmigration on the other.

In conclusion, I would like to draw attention to one more parallel between *Phaedo* and *On Regimen*. Apart from the 'ancient doctrine', which serves

297 Diogenes Laertius, *Vitae* 2.66 and 68 (ed. Dorandi).

298 The exclusive importance of a philosophical training for the soul's fate after death is emphasised regularly in Plato's eschatological accounts (*Phdr.* 249a f., *Phd.* 82b f., 107d, *R.* 617d–e, *Tim.* 92a).

Socrates as a starting point in his cyclical argument for the immortality of soul,²⁹⁹ a series of other arguments is provided and some alternative conceptions are discussed, including the notion of soul as harmony. Shortly before this concept is introduced, Socrates suggests that whilst body is visible, always changing and never consistently the same, compounded and perishable, soul, by contrast, is invisible, always the same, dissoluble and therefore immortal.³⁰⁰ In response to this line of argument Simmias introduces the following notion of soul which seems to match Socrates' conditions:

One might make *the same argument* about harmony, lyre and strings, that a harmony is something invisible, without body (ἀόρατον καὶ ἀσώματον), beautiful and divine in the attuned lyre, whereas the lyre itself and its strings are bodies and bodily (σώματά τε καὶ σωματοειδῆ), composite (σύνθετα), earthly and akin to what is mortal. Then if something breaks the lyre, cuts or breaks the strings and then insists, *using the same argument as you*, that the harmony must still exist and is not destroyed because it would be impossible for the lyre and the strings, which are mortal, still to exist when the strings are broken, and for the harmony, which is akin and of the same nature as the divine and immortal, to be destroyed before that which is mortal; he would say that the harmony itself still must exist and that the wood and the strings must rot before the harmony can suffer. And indeed, Socrates, I think *you must have this in mind*, that we really do suppose the soul to be something of this kind; as our body is stretched and held together (ἐντεταμένους τοῦ σώματος ἡμῶν καὶ συνεχομένους) by the hot and the cold, the dry and the moist and other such things, and our soul is a mixture and harmony (κρᾶσιν εἶναι καὶ ἁρμονίαν) of those things when they are mixed with each other rightly and in due measure (καλῶς καὶ μετρίως κραθῇ πρὸς ἄλληλα).³⁰¹

The concept of soul introduced in this passage evidently refers to an existing theory well known to Socrates and his interlocutors and complying with Socrates' definition of soul, as Simmias' references to 'the same argument' also suggest. Soul taken as a harmony is invisible, 'akin and of the same nature as the divine and immortal', and therefore survives the decomposition of the body. Nonetheless, in what follows Simmias provides an argument which does

299 Plato, *Phd.* 69e5–72d10.

300 Plato, *Phd.* 78b4–81a11.

301 Plato, *Phd.* 85e3–86c2, ed. Burnet, trans. Grube (modified).

not follow from the previous considerations and, rather surprisingly, denies the immortality of soul. It reads as follows:

If then the soul is stretched without due measure (*ἀμέτρως*) by diseases and other evils, the soul must immediately be destroyed, even if it be most divine, as are the other harmonies found in music and all the works of artists, and the remains of each body last for a long time until they rot or are burned. Consider *what we shall say in answer to one who deems the soul to be a mixture of bodily elements* and to be the first to perish in the process we call death.³⁰²

This passage presents a kind of turnabout in Simmias' argument, for instead of the 'divine and immortal' harmony which survives the destruction of the instrument, now we read that the soul 'must immediately be destroyed'. The concept of soul as harmony seems to allow a kind of immortality, but, and this is probably the crucial problem for Plato, not immortality of the individual soul.³⁰³ Accordingly, the second part of Simmias' speech seems to be Plato's own response to a theory which is in a way very similar to his own position yet not entirely suitable for his moralistic goals.³⁰⁴

302 Plato, *Phd.* 86c2–d4, ed. Burnet, trans. Grube (modified).

303 This conception clashes with Plato's 'ethically pivotal conviction', as Sedley 2009, 145 puts it, 'that the soul outlives its present incarnation, to be duly rewarded or punished'.

304 Considering the possibility (discussed below) that Simmias refers to Philolaus in this passage, it is not clear whether he believed in transmigration. On this question, Huffman 2012 draws the following conclusion: 'Some have thus thought that Philolaus did not believe in the immortality of the soul or transmigration (see Huffman 1993, 328–332). It is more likely, however, that he regarded the *psychê*, which was the center of desires and emotions located in the heart and shared with animals, as a harmony of its own material elements. This may have been drawn in with the first breath of the infant and from its seat in the heart it may have served as the command center which establishes the harmony of hot and cold that makes the body ensouled. After the body loses its harmony and dies, this command center soul survives to transmigrate into the hearts of other animals and men. If the *psychê* was the transmigrating soul for Philolaus, it follows that he did not think that humans were reborn as plants, since according to fr. 13 plants do not have a *psychê*. Moreover, it would only be the human character as constituted by emotions and desires that transmigrates and not human intellect, since according to fr. 13 *psychê* does not include intellect (Huffman 2009)'. Supposing that Philolaus held such a conception of soul, it would certainly not satisfy Plato who builds on the supposition that the individuality of the immortal soul consists in the intellect. Neither would the version of transmigration I have reconstructed in *On Regimen*, taken hypothetically as another alternative on the board, serve these purposes. For the transmigrating soul particles, although they

As for the originator of this theory, Philolaus, one of the most prominent Pythagorean philosophers of the time, is often considered to be a strong candidate.³⁰⁵ Simmias, together with Cebes, is said in the *Phaedo* to ‘keep company with Philolaus’ (συγγεγονότες),³⁰⁶ but the theory of harmony is not explicitly ascribed to him in the passage under consideration. The question whether Philolaus believed that soul was a harmony has been much discussed without any firm conclusions being arrived at.³⁰⁷ Nonetheless, Huffman holds that ‘Philolaus’ metaphysical system, as found in the surviving fragments, suggests that he may have thought the soul to be a harmony’.³⁰⁸ But the concept of mixture (χρᾶσις) is also mentioned in the passage on the same footing with harmony. Mixture was essential for the medical dietetics analysed in chap. 1 and this term, together with Simmias’ allusion to diseases which can disturb the due proportion of soul, may suggest a specifically medical context for the discussion.³⁰⁹

Aristotle refers to a closely related conception: within the discussion of his predecessors in the first book of *On the Soul* he mentions a theory according to which soul is a harmony, specified as a ‘mixture or composition of contraries’ (χρᾶσιν καὶ σύνθεσιν ἐναντίων εἶναι).³¹⁰ This seems to be the same kind of conception as is mentioned in the *Phaedo*, which Aristotle introduces as a ‘traditional theory about the soul, which many find the most credible of all current theories, and which has been approved by the verdict of public opinion’.³¹¹ Instead of Pythagorean origins Aristotle’s report suggests that such a theory

are in a way individual, have little to do with one’s intellect and character, for the features of human character depend on the passages in the particular fully developed body which is in its totality perishable, and intelligence depends not only on some bodily passages but also on the balance between fire and water within the body, which as a whole cannot be expected to survive after one’s death.

305 Diogenes Laertius (*Vitae* 8.85) reports that Plato bought a book of Philolaus and used it when writing his *Timaeus*. Unlike in the *Timaeus*, in the *Phaedo* we find a direct reference to Philolaus. Huffman 2012 therefore suggests: ‘There is the possibility that on his first visit to Southern Italy and Sicily in 388–7 Plato met an aged Philolaus in Tarentum (D.L. 111 36). This would motivate Plato’s allusion to Philolaus as the teacher of Socrates’ interlocutors, Simmias and Cebes, in the *Phaedo*, which scholars have often dated in the years immediately following Plato’s return from Italy.’

306 Plato, *Phd.* 61d6–7, ed. Burnet, trans. Grube.

307 Cf. Guthrie 1962, 309–310, Huffman 1993, 326–327.

308 Huffman 2009, 29.

309 As for Philolaus, he certainly also speculated about the causes of diseases, as the *Anonymus Londinensis* (18.8–19.1, ed. Manetti) attests, but the term χρᾶσις is attested in none of the extant fragments ascribed to him.

310 Aristotle, *DA* 407b30–32, ed. Ross.

311 Aristotle, *DA* 407b27–29, trans. Hett.

was well established and consensually accepted in Aristotle's (and accordingly most probably already in Plato's) time, and that it was associated especially with medical discussions, as is indicated by not only the term *κρᾶσις* but also the following assessment of Aristotle: 'It seems more in accord with the facts to connect harmony with health (*καθ' ὑγείας*) or generally with good condition of the body (*ὅλως τῶν σωματικῶν ἀρετῶν*) than with the soul.'³¹² Both Aristotle and Plato mention this theory because they find it relevant to the discussion and both criticize it, each for their own purposes, in order to illustrate their own positions in the debate. We can, therefore, suggest that both thinkers reflected on a theory which was prominent at that time and for which *On Regimen* provides the closest extant parallel. The most striking similarity consists in the concept of *κρᾶσις* as a balance of opposite qualities which holds together body and which is identified as soul, depending on a harmony of bodily constituents.³¹³ It should be admitted that soul is nowhere in the Hippocratic text explicitly identified with harmony, but the notion of mixture, which underlies the concept of soul, is illustrated with harmonic compositions in chap. 18, and also certain bodily structures are explained with the help of three harmonic intervals in chap. 8. And since the whole cosmos is organized in the same three intervals, the human body and the cosmos are seen as structurally analogous (chaps. 10 and 89–90). What role exactly was played by *On Regimen* in this history cannot be decided yet at this point, but we can certainly conclude that this dietetic text represents an otherwise poorly documented tradition of thought which influenced the two most prominent philosophers of the fourth century BCE.

312 Aristotle, *DA* 408a1–3, ed. Ross, trans. Hett. Like Plato, Aristotle also rejects the concept of harmony as suitable for the soul, but in principle he sides rather with Plato's opponents when putting forward the following line of argument: 'And for this reason those have the right conception who believe that the soul does not exist without a body and yet is not itself a kind of body. For it is not a body, but something which belongs to a body, and for this reason exists in a body, and in a body of such and such a kind' (*DA*, 414a19–25, trans. Hamlyn). Cf. Hamlyn 1968, 91.

313 An even more striking parallel with *On Regimen* is to be found in Aristotle's *Ph.* 246a10–b6, ed. Ross (quoted on pp. 277–278), where we read that bodily excellences (*ἀρεταί*) such as health and fitness consist 'in the mixture and due proportion' (*ἐν κρᾶσει καὶ συμμετρίᾳ*) of the warm and cold things. It is noteworthy that although the adjective *σύμμετρος* or the adverb *σύμμετρως* are quite common throughout the Hippocratic corpus, the substantive *σύμμετρίη* appears only in *On Regimen* and no other medical text which can be dated to the Classical period. Apart from *On Regimen* (*Vict.* 1.2 = Joly-Byl 124.11 = L. 6.470; 1.32 = 148.31 = L. 6.510; 2.66 = 190.26 = L. 6.588; 3.67 = 194.3 = L. 6.592; 3.83 = 216.4 = L. 6.634), among the Hippocratic writings it is attested only in *Off.* 25 (L. 3.334.7) and *Ep.* 16 (L. 9.346.12), which are both most probably of Hellenistic or even later origin.

The Philosophical Legacy of *On Regimen*

Those doctors who are more subtle and inquisitive have something to say about the study of nature and claim to derive their principles from it, while the most polished of those who study nature generally end up by considering medical principles.

(ARISTOTLE, *Resp.* 480b26–30)

Introduction

In order to set the anonymous treatise into an approximate chronological framework, in the previous chapters I have been working on the hypothesis that the author of *On Regimen* was an approximate contemporary of Plato. I have compared various aspects of the treatise with its predecessors and contemporaries but, with the exception of Galen, so far I have not introduced any literary evidence which would attest the impact of the text on other authors. Galen affirms that in his time, i.e. more than five centuries after the composition of *On Regimen*, the treatise was well known, circulated in several versions, was associated with other so-called Hippocratic treatises, although its authorship was disputed.¹ But what was the situation before Galen? Do we have any evidence that *On Regimen* was available and read as early as the fourth century BCE, i.e. immediately after its publication? And can we suppose that its author was still known at that time? Was the treatise already associated, as in later times, with the name of Hippocrates?² Or did it circulate anonymously? If so, should we assume that the author's name has been lost at some point in the course of its transmission? Or is it possible that the author originally released his work without putting his name on it?

It is not easy to answer any of these questions, but it is probable, as the evidence discussed in the current chapter suggests, that *On Regimen* circulated anonymously already in the fourth century BCE. This possibility should be

¹ See above (Introduction, p. 3).

² The treatise is not mentioned in Bacchius' 3rd century BCE glossary. Yet due to the fact that the glossary lists only strange words which Bacchius found in the Hippocratic collection, this does not rule out the possibility that *On Regimen* was already included.

stressed here for it complicates the inquiry pursued in this chapter. My main aim here is to set out the case that both Plato and Aristotle were well acquainted with the treatise, although it must be admitted that the evidence, as strong as it is, is all indirect. Not only can an anonymous text not be identified by its author, but there is neither any explicit reference to the title of the treatise nor a single verbatim quotation from it to be found either in Plato or in Aristotle. I am, however, convinced that the cumulative evidence I present here is sufficiently strong to conclude that both philosophers read the treatise and that it must have been composed and released into circulation before Plato's *Timaeus* and some of Aristotle's naturalistic works were written. More importantly, as I shall try to substantiate, both philosophers esteemed at least some aspects of the dietetic account as highly relevant to the discussion of the nature of man and as important for their own conceptions and theories. Consequently, reading the Platonic and Aristotelian passages against the backdrop of *On Regimen* can bring new insights into a number of the naturalistic theories employed by the two most important figures of Classical Greek philosophy.

In the first section I focus on Plato and particularly his *Timaeus*, which provides some of the closest parallels to the Hippocratic text and introduces a kind of moralized version of dietetics, which can hardly be conceived to be completely independent from the specific notion of dietetics we find in *On Regimen*. Then I turn to Aristotle and discuss three groups of topics relevant to the Hippocratic treatise. I start with the concept of innate heat as it is elaborated in Aristotle's *On the Soul*, *On the Parts of Animals*, and several treatises of the so-called *Parva Naturalia*. The second complex issue relates to the concept of health as a balance of opposites, which Aristotle shares with the medical authors of the day, and the notion of self-healing nature, which suggests a suitable precursor for Aristotle's concept of natural teleology, although he restricts its applicability considerably in the case of healing diseases. And finally, in the last section I discuss two famous passages from *Parva Naturalia* where Aristotle speaks most explicitly about the relationship between natural philosophy, which is his own subject, and medicine, which follows different goals than natural philosophy but works on theoretical assumptions common to both fields of knowledge.

1 Plato's *Timaeus* on the Therapy of the Soul

As suggested in the previous chapter, Plato and the author of *On Regimen* discuss closely related topics, most probably draw on common sources, and thus, directly or indirectly, take part in the same discussion on the soul and the

nature of man. So far I have discussed parallels with the *Phaedo* but there are passages in other dialogues as well which can support this conclusion or even, as some scholars suggest, confirm that Plato borrows ideas directly from the Hippocratic treatise. R.G. Bury, for instance, analyses the myth of androgynes and the theory of sex-characteristics in Aristophanes' speech in the *Symposium*, compares it with the 'theory of the evolution of sex' presented in *On Regimen* (chap. 28), and concludes that 'we may imagine, then, that Aristophanes, having before his mind some such physiological theory as this, proceeded to adapt it to his purpose... Aristophanes intended to satirize the theories of generation and of sex-evolution which were argued so solemnly and so elaborately by the confrères of Eryximachos.'³ In reaction to Bury, E. Craik even suggests that Plato used the ideas of *On Regimen* extensively, notably in his presentation of the doctor Eryximachos.⁴ M. Vegetti holds that, despite explicitly criticising Herodicus in the *Republic*, the main target of Plato's criticism is, in fact, *On Regimen*,⁵ and S. Byl identifies interesting parallels between *On Regimen* (chap. 35) and (pseudo-)Plato's *Second Alcibiades* (140c–e).⁶ The methodological passage in *Phaedrus* (270c–d), in which Plato depicts Hippocrates' method, has been repeatedly compared with *On Regimen*,⁷ and W. Smith even uses this parallel as the main argument for drawing the rather controversial conclusion that *On Regimen* was written by the historical Hippocrates.⁸ S. Fischerová proposes that in Plato's *Statesman* (294b–295b) the analogy drawn between the general instructions, written by doctors and gymnastic trainers for their patients and clients, and the laws, which are written for the majority of cases (for it is not possible to assign accurately to each individual what is appropriate for him), reflects the methodological considerations introduced

3 Bury 1932, xxxii–xxxiii. On this occasion, Bury (p. xxix) also mentions Pfeleiderer 1896, 551–553 who went so far as to suggest, on the basis of the parallels in Plato's *Symposium* and *On Regimen*, that the real author of the Hippocratic treatise was Eryximachos. Although Eryximachos was not only Plato's character, but 'a real person from a real medical family', as E. Craik 2001, 109 puts it with reference to Plato (*Prt.* 315c, *Phdr.* 268a) and Xenophon (*Mem.* 3.13.2, ed. Marchant), there is no reliable evidence for Pfeleiderer's suggestion.

4 Craik 2001. See also Craik 2009, 39 and 2015, 275.

5 Vegetti 1996.

6 Byl 2002.

7 E.g. Joly 1983b or Thein 2012. For a useful review of the earlier history of the discussion see Joly 1961.

8 Smith 1979, 44–60, rejected by Lloyd 1991 and Mansfeld 1980, reiterated in Smith 1999. In spite of his skepticism about Smith's thesis, Lloyd 1991, 196 acknowledges that the description of the method of Hippocrates in Plato's *Phaedrus* shows some similarities to *On Regimen*, at least more than it does to Galen's candidate *On the Nature of Man*.

in the second chapter of *On Regimen*.⁹ Each of these suggestions, I believe, should be taken seriously, yet the most convincing evidence for establishing a strong historical connection between Plato and the Hippocratic text is to be found in the *Timaeus*, to which I confine my attention in what follows.

Strikingly close parallels between the two texts have been recognized and discussed by a handful of scholars,¹⁰ who have also embarked on speculations about the mutual relationships between the texts and their authors. Some suggest that both authors draw on a common Pythagorean source,¹¹ such as Philolaus,¹² while others argue for the possibility that Plato was acquainted with *On Regimen* and draws on some of its ideas. A.L. Peck has already devoted a great deal of attention to the parallels between the two texts, arriving at the conclusion that the Hippocratic concept of soul corresponds to the third soul in the *Timaeus* ('it behaves exactly as that soul behaves').¹³ A. Olerud emphasises the notion of the circuits in the two texts, paying special attention to their relevance to thinking, and finds a curious coincidence in the detail of the texts. But he also mentions noteworthy differences, such as the circuits being three in number in *On Regimen* whilst in the *Timaeus* there are only two.¹⁴

J. Sisko examines some of Peck's suggestions and proposes that when we consider the whole of *On Regimen* and, especially, when we consider the theme of 'the physics of cognition', which is introduced in the first book and is taken up again in the fourth book, 'a deep and programmatic link between *Regimen* and the *Timaeus* emerges'.¹⁵ Therefore, he concludes, the cognitive psychology and cosmology advanced in *On Regimen* 'play crucial and substantive roles in shaping both Plato's theory of the human rational soul and

9 Fischerová 2012, 72–75.

10 Peck 1928, 103–112, Olerud 1951, 52, Joly 1960, 52 and 70–71, Sisko 2006, Jouanna 2007. Cf. Tracy 1969, 142–156.

11 Olerud 1951, 70, Joly 1960, 52.

12 As already mentioned, Diogenes Laertius (*Vitae* 8.85, ed. Dorandi) suggests that Plato bought a book of Philolaus and used it when writing his *Timaeus*.

13 Peck 1928, 74 and 103–112.

14 Olerud 1951, 64–65 (trans. N. Allies in Jouanna 2012, 220 n. 69): 'However, we observe that one of these two circles is elliptic and includes the solar and lunar circle, as well as all the planetary circles. The main difference is that in the microcosm, these circles correspond to different things. In Plato, they are more or less the symbol of the immortal soul and they reside in the head. In the author of π. διαίτης they represent certain venous networks. However, here we must not exaggerate the differences. These venous networks are in fact a type of circulation of fire, particularly the intermediary network, which corresponds to the solar circle, and is truly a circle of thought.'

15 Sisko 2006, 6.

his account of the relation between the rational soul and the heavens in the *Timaeus*.¹⁶ He opens with a discussion of the term *periodos*, which is rarely used in the writings of the pre-Socratic cosmologists, playing a doctrinal role only in *On Regimen* amongst all the pre-Platonic philosophical, scientific and medical texts.¹⁷ There, as Sisko suggests, it is consistently used to mean 'circuit' or 'way round' and is employed both in describing celestial phenomena and in describing certain structures in the human body and 'phenomena of the human soul'.¹⁸ Though the expression occurs also in other medical texts, it is rarely used there to mean 'circuit', and never used to describe the structure of the human body.¹⁹ The role of *periodos* in the *Timaeus*, where it is employed both in describing phenomena of the human rational soul and in describing celestial phenomena, is 'strikingly similar' to the role the term plays in *On Regimen* and 'the similarity is too thoroughgoing to be a matter of mere happenstance'. The best explanation for the similarity is, according to Sisko, 'the presence of a firm historical connection between these two works',²⁰ which leads him to the conclusion that the text of *On Regimen* had 'a significant influence upon Plato's thought'.²¹

Similar views have been presented independently by J. Jouanna,²² who emphasizes the fact that *On Regimen* has 'a very dynamic and concrete

16 Sisko 2006, 6.

17 Sisko 2006, 7.

18 Sisko 2006, 7.

19 Sisko 2006, 7–8.

20 Sisko (2006, 12–13) summarizes the parallels between the two texts as follows (in the quotation he refers to *On Regimen* as *Peri Diaites* and holds that it was written by a Sicilian author, which is a debatable assumption but without relevance for the present discussion): 'Like the author of *Peri Diaites*, Plato advances a theory of kinship between the human rational soul and the heavens and, while his own cosmology and cognitive psychology are certainly more complex, Plato, like his Sicilian predecessor, explains this underlying kinship in terms of parallels between our cognitive circuitry and the circuitry of the heavens. Further, Plato, like the author of *Peri Diaites*, asserts that we have intellectual health when our cognitive circuits function well. In addition, he stresses the importance of proper diet and exercise. But, here, Plato's view is somewhat different from that which is advanced in *Peri Diaites*. According to our Sicilian author, proper diet and exercise are sufficient for health, while, for Plato, these are merely necessary for health. Diet and exercise alone do not repair the damage that has already been done to our cognitive circuitry: good regimen only wards off any further (or future) damage.'

21 Sisko 2006, 14.

22 Jouanna presented his views in a conference paper already in 1966 and one year later a summary of his paper was published. In this sense at least some of his ideas pre-date those of Sisko. Nevertheless, the full blown version of his interpretation was published as

conception of soul', it is a fluid composed of fire and water, which travels around the body through passages, which are circular.²³ Supposing that the theory of intelligence in *On Regimen* is based on a rotation within the body and that it is the soul which rotates, Jouanna places the theory within the broader context of biological thought and shows its privileged intermediary role in between Empedocles and Plato's *Timaeus*.²⁴

The mere fact that in both the *Timaeus* and *On Regimen* the soul travels in rotations, and these rotations are called by the same term (περίοδος), connected with the rotation of the heavenly bodies, is according to Jouanna not sufficient to conclude a direct influence of *On Regimen* on the *Timaeus*, since the two theories could derive from a common, 'possibly Pythagorean', source.²⁵ Accordingly, Jouanna proceeds to a discussion of two passages in the *Timaeus* which connect intelligence with the rotations of soul (43b–44b) and explain diseases of the soul through the unhealthy state of the body, namely the state of an abundance of nutriment leading to ignorance and forgetfulness (86e–87a). These, he claims, represent a theory 'entirely comparable to that found in the Hippocratic treatise *Regimen*'.²⁶

The most important similarity and the most persuasive piece of evidence for the claim that the *Timaeus* depends on *On Regimen* is found by Jouanna in a passage in which Timaeus says that 'the rotation of the soul towards which the perceptions (αἰσθήσεις) are carried and collide from the exterior (ἔξωθεν αἰσθήσεις τινὲς φερόμεναι καὶ προσπεσοῦσαι), take with them the whole vessel of the soul, whilst these rotations, though actually mastered, appear to have the mastery'. Because of all these affections, Timaeus holds, 'the soul becomes at first irrational (ἄνους) when it is bound with a mortal body'.²⁷ In this case the connection with chap. 35 of *On Regimen* is undeniable, argues Jouanna, for in both texts we find the plural noun αἰσθήσεις/αἰσθήσεις, as the subject of the

late as in 2007, which explains why I discuss Jouanna after Sisko. Given the fact that Sisko draws on Peck's suggestions but mentions neither Jouanna nor Olerud, while Jouanna refers to Olerud but consults neither Peck nor Sisko, Jouanna's and Sisko's investigations seem to represent two independent enterprises arriving at surprisingly similar conclusions. As for Jouanna, for the sake of convenience I will refer to the English translation of his paper published in 2012.

23 Jouanna 2012, 203–204. Jouanna argues for the circular movement of soul on the basis of his reading of the passage in chap. 25 where he finds a perfect synonymy between κίνησις and περιφορά.

24 Jouanna 2012, 215.

25 Jouanna 2012, 222.

26 Jouanna 2012, 223.

27 Plato, *Tim.* 44a5–b1, ed. Burnet.

same verb of movement *προσπίπτειν*, and in both cases ‘it concerns the same movement of transfer of sensory particles coming from the exterior and issued from objects, and of the same movement of penetration of these sensory particles against the rotation of the soul by the corporeal channel of senses.’²⁸ ‘I know of no other text in the pre-Platonic literature’, concludes Jouanna, ‘that is so close to the *Timaeus* as that of *Regimen*’. Although he does acknowledge the possibility that chap. 35 and the parallel passage in the *Timaeus* are the only witnesses of a technical sense of the word that had currency amongst the medical and philosophical writers of the late fifth and early fourth centuries BCE, it is ‘not unreasonable’, he writes, to think that Plato borrowed it directly from *On Regimen*.²⁹

Towards the end of his analysis, Jouanna points to a significant transposition in Plato which marks an important stage in the history of theories of thought. ‘Plato does not situate the rotation of the soul in the region of the belly, but in the brain’.³⁰ ‘The treatise *Regimen*, in virtue of its explanation of intelligence by reference to the speed of a rotation within the body, seems a neglected link of the chain which, in theories of perception and thought, should link Empedocles to Plato’s *Timaeus*’.³¹

In his 2013 contribution to the volume ‘Mental Disorders in the Classical World’ edited by W.V. Harris, Jouanna makes one more important step towards establishing the historical importance of *On Regimen* for the *Timaeus* as well as for the ‘genesis of the concept of a mental illness’ in general. He compares *On Regimen* with the concept of two kinds of insanity in the Hippocratic *On the Sacred Disease*, where insanity is explained as a modification of the elemental qualities of the brain in terms of wetness (*μαϊνόμεθα μὲν ὑπὸ ὑγρότητος*),³² which is provoked by two humours: bile as the hot element, and phlegm as the cold one. The critical passage reads as follows:

Those who are mad because of the effect of phlegm (*οἱ μὲν ὑπὸ φλέγματος μαϊνόμενοι*) are calm and neither scream nor are violent, whereas those who are mad because of the effect of bile (*οἱ δὲ ὑπὸ χολῆς*) are raucous, maleficent, and will not remain in one place, but rather always set themselves to doing something inappropriate.³³

28 Jouanna 2012, 225.

29 Jouanna 2012, 226.

30 Jouanna 2012, 227.

31 Jouanna 2012, 227.

32 *Morb. Sacr.* 14 (Jouanna 26.13 = L. 6.388).

33 *Morb. Sacr.* 18 (Jouanna 27.7–10 = L. 6.388), trans. C. Wazer in Jouanna 2013, 99.

Jouanna recognizes here what he calls a 'binary typology', which is not dissimilar to what we read in *On Regimen*. In chap. 35, the fourth constitution of the soul is said to be dominated by water and produces madness (μανία) tending more to slowness (ἐπὶ τὸ βραδύτερον),³⁴ and in the seventh constitution fire dominates and the soul is too quick (ὀξεῖα ἢ τοιαύτη ψυχὴ ἄγαν).³⁵ There is a common pattern followed in both treatises, as Jouanna rightly points out: fire in *On Regimen* incites movement (κίνησις) in the same way as does the heat of bile in *On the Sacred Disease*. And likewise, 'water brings about the deceleration of the spirit' in *On Regimen*, 'just as phlegm, the cold humour' does in *On the Sacred Disease*.³⁶ Nevertheless, the great innovation of *On Regimen*, when compared with the other Hippocratic account, is that soul 'has now become an agent in the explanation of perceptions, feelings, and intelligence.'³⁷ According to this interpretation, Plato's *Timaeus* employs, 'a sort of synthesis of the representation in *On the Sacred Disease*, which places thought in the brain, and the one in *On Regimen*, which depicts the soul as a circuit around the stomach'.³⁸ Plato's principle innovation seems to be that 'he articulates for the first time (in the surviving literature) a vitally important notion, the illness of the soul (νόσον ψυχῆς)', a new idea which had 'a great future before it'.³⁹

Having reviewed some of the most striking parallels between *On Regimen* and the *Timaeus* as discussed in recent scholarship, which attest remarkable affinities in terminology and particular technical details, it is time now to bring the message of the dietetic account in *On Regimen* further into focus by comparing it with the dietetic instructions given in the *Timaeus*. While in the *Republic*, as I discussed at the beginning of the first chapter of this study, Plato's Socrates criticizes Herodicus and presents a strongly critical view against dietetic prevention in general, Timaeus' view of medical dietetics is much more positive. First he discusses separately causes of diseases of the body (82c–86a) and of the soul (86b–87b), and then turns to the question of 'how to treat our bodies and states of mind and preserve them whole'.⁴⁰ In what follows, Timaeus

34 *Vict.* 1.35 (Joly-Byl 154.7–9 = L. 6.518).

35 *Vict.* 1.35 (Joly-Byl 156.3–4 = L. 6.520).

36 Jouanna 2013, 102.

37 Jouanna 2013, 102.

38 Jouanna 2013, 103.

39 Jouanna 2013, 104. Terminologically speaking, Jouanna is right that Plato introduces the term 'disease' of the soul for the first time, yet we should not forget about the concepts of 'passions' or 'affections' (πάθη) of the soul about which Democritus (DK 68 B 31) speaks, or the 'disturbance' (τάραξις) of the soul we find in *On Regimen* (*Vict.* 4.89, Joly-Byl 222.28 = L. 6.648; cf. *Vict.* 4.88, Joly-Byl 220.10 = L. 6.644).

40 Plato, *Tim.* 87c1–2, ed. Burnet, trans. Zeyl.

employs the same dietetic concepts as attested in *On Regimen*, although he transforms them significantly.

Firstly, he introduces symmetry as a necessary condition of what is good, beautiful and in the end also healthy: 'all that is good is beautiful, and what is beautiful is not void of due measure'. It follows that the living creature that is to be beautiful 'must be symmetrical'.⁴¹ Also in determining health and disease 'no proportion or lack of it is more important than that between soul and body'.⁴² Timaeus gives an example of a body which lacks proportion because its legs or some other parts are too long or big: 'It is not only ugly but also causes itself no end of troubles'.⁴³ And in the same vein we ought to think of 'that combination of soul and body which we call the living being'.⁴⁴ When the soul is more powerful than the body and this soul gets excited, 'it churns the whole being and fills it from inside with diseases, and when it concentrates on one or another course of study or inquiry, it wears the body out'.⁴⁵ Conversely, when the body is too large for its soul, its motions predominate and 'render the soul dull, stupid and forgetful, thereby bringing on the gravest disease of all: ignorance'.⁴⁶

As for the therapy, Timaeus suggests that 'there is in fact one way to preserve both body and soul (μία δὴ σωτηρία πρὸς ἄμφω), and that is not to exercise the soul without exercising the body, nor the body without the soul, so that each may be balanced by the other and so be sound (ἵνα ἀμυνομένω γίγνησθον ἰσορρόπῳ καὶ ὑγιῇ)'.⁴⁷ He recommends to every mathematician (μαθηματικός) or the ardent devotee of any other intellectual discipline (διάνοια) to 'provide exercise for his body by taking part in gymnastics', and also the one who 'takes care to develop his body' is recommended to 'practice the exercises of the soul by applying himself to the arts and to every pursuit of wisdom (μουσικῇ καὶ πάσῃ φιλοσοφίᾳ), if he is to truly deserve the joint epithets of fine and good (ἅμα μὲν καλός, ἅμα δὲ ἀγαθός)'.⁴⁸ On the whole, Timaeus advises that all these things should be moderated by regimen (διδίταις), 'to the extent one is free and has the time to do so (καθ' ὅσον ἂν ᾗ τῷ σχολῇ)'.⁴⁹ He concludes by repeating the

41 Plato, *Tim.* 87c4–6, ed. Burnet: πᾶν δὴ τὸ ἀγαθὸν καλόν, τὸ δὲ καλὸν οὐκ ἄμετρον· καὶ ζῶον οὖν τὸ τοιοῦτον ἐσόμενον σύμμετρον θετέον.

42 Plato, *Tim.* 87d1–3, trans. Zeyl.

43 Plato, *Tim.* 87e1–2, trans. Zeyl.

44 Plato, *Tim.* 87e5–6, trans. Zeyl.

45 Plato, *Tim.* 87e6–88a3, trans. Zeyl.

46 Plato, *Tim.* 87e1–2, trans. Zeyl.

47 Plato, *Tim.* 88b5–c1, ed. Burnet, trans. Zeyl (modified).

48 Plato, *Tim.* 88c1–6, ed. Burnet, trans. Zeyl.

49 Plato, *Tim.* 89c7–d1, ed. Burnet, trans. Zeyl (modified). While in the *Republic* (406a–c) Plato criticized dietetics on precisely this point, i.e. that the leisure time one has can be

idea that ‘there is but one way to care for anything (θεραπεία δὲ δὴ παντὶ παντός μίᾳ)’; which he finally specifies as providing to each individual the proper ‘nourishment and motions (τροφὰς καὶ κινήσεις)’.⁵⁰

In agreement with the author of *On Regimen*, Timaeus holds that one can treat illnesses by moderating regimen in order to re-establish the equilibrium between the constitutive parts of man, although these are not fire and water, as we find in *On Regimen*, but rather soul and body.⁵¹ The idea that regimen consists first of all in ‘nourishment and motions’, which is one of the most original contributions of the Hippocratic author to the dietetic discussion, is adopted by Plato with an important innovation, namely that there are three kinds of soul, each residing at different place in the body and each having its own motions.⁵² And since each part of the body must be treated ‘in imitation of the structure of the universe’,⁵³ the most important part of soul, which is housed in the top of our body and which ‘God has given to each of us, as his guiding spirit (δαίμονα),’⁵⁴ also has its appropriate desires and motions. These motions are specified in the following way:

And the motions that have an affinity to the divine part within us are the thoughts and revolutions of the universe. These, surely, are the ones which each of us should follow. We should redirect the revolutions in our heads that were thrown off course at our birth, by coming to learn the harmonies and revolutions of the universe, and so bring into conformity with its objects our faculty of understanding, as it was in its original condition. And when this conformity is complete, we shall have achieved our goal: that most excellent life offered to humankind by the gods, both now and forevermore.⁵⁵

expended completely on dietetic care, here he ardently recommends dietetics to anyone who can afford it, which obviously remind us of the passage in *On Regimen* addressing those who have enough freedom and leisure to accommodate their life-style to the needs of health (*Vict.* 3.69, Joly-Byl 200.23–28 = L. 6.604–606).

50 Plato, *Tim.* 90c6–7, ed. Burnet, trans. Zeyl (modified).

51 Cf. Jouanna 2013, 106 n. 23.

52 Plato, *Tim.* 89e3–5.

53 Plato, *Tim.* 88c7–d1, ed. Burnet, trans. Zeyl: κατὰ δὲ ταῦτὰ ταῦτα καὶ τὰ μέρη θεραπευτέον, τὸ τοῦ παντός ἀπομιμούμενον εἶδος. We should note that within his dietetic account Timaeus introduces the concept of *mimēsis* which also plays a leading role in *On Regimen*, especially in book 4 (see above, 132–138).

54 Plato, *Tim.* 90a2–4.

55 Plato, *Tim.* 90c7–d7, trans. Zeyl.

Plato's dietetics, therefore, is not limited to mundane nutrition and exercise, but, as highlighted by Sisko, is expanded by the study of the heavens: 'Astronomy is, for Plato, a form of intellectual diet and exercise.'⁵⁶ Plato's discussion of astronomy is thus tied to the discussion of dreams in *On Regimen*. According to the Hippocratic author, accurate cognition of celestial phenomena in dreams stands as a key sign for diagnosing intellectual health, while chaotic representations of their movements indicate a soul disturbed by thoughts, which can be cured by contemplating things which are comic or which please the soul in some other way.⁵⁷ For Plato the rational soul in each of us is sick from the moment it is embodied, and there is, therefore, no need for an individual diagnosis, for each and every rational soul necessarily needs a continuous cure. As in the Hippocratic account, Plato also suggests a kind of contemplation in order to cure this part of soul, namely contemplation of the heavenly bodies and their movements. He seems to rely on this very account and transforms this diagnostic tool into a therapeutic technique. 'The study of astronomy is, for Plato, a therapeutic and restorative mode of cognition and such cognition is, as he sees it, an activity that reason is meant to engage in when it is truly mistress of its own household.'⁵⁸

To conclude, in comparison with the *Phaedo* the motions of the body in the *Timaeus* are not seen simply as a hindrance to a good life but, as Johansen puts it, 'as a part of a more positive view of embodied life'.⁵⁹ The human body here appears less like a prison for the rational soul and more like 'a rather comfortable hotel with quite a few research facilities built in'.⁶⁰ The mortal soul is 'embedded' in the body from which it is hardly distinguishable, as Fronterotta remarks.⁶¹ Therapy of the body is no longer something despicable and incompatible with the philosophical care of the soul, as it is in the *Phaedo* or *Republic*, but rather an essential part of the complex dietetic prevention, which is recommended to anyone who can afford it. The positive approach to dietetics in the *Timaeus*, taken together with the remarkable number of other particular concepts held in common with *On Regimen*, allows the assumption that it was specifically this Hippocratic text which served Plato as a paradigm in revising his previous conceptions and suggesting a new version of the care of the soul. Plato reflects the sophisticated elaboration of the dietetic care found in *On*

⁵⁶ Sisko 2006, 13.

⁵⁷ *Vict.* 4.89 (Joly-Byl 222.28–31 = L. 6.648–650).

⁵⁸ Sisko 2006, 13–14.

⁵⁹ Johansen 2004, 156.

⁶⁰ Johansen 2004, 157.

⁶¹ Fronterotta 2006, 152. Cf. Karfik 2005 and Carone 2005.

Regimen, including therapy of both body and soul, and develops this picture by integrating ethical and moral concerns. We can therefore speak about Plato's moralized dietetics,⁶² which builds, to a great extent, on his Hippocratic precursor, but transforms it and accommodates it according to his own moralistic goals.

Based on the analyses presented above, we may conclude that the anonymous manual for dietetic prevention, which we know under the title *On Regimen* and which later became a part of the so called *Corpus Hippocraticum*, was read and discussed as a philosophically significant text already by Plato in later period. In the following sections I shall argue that Aristotle also paid considerable attention to the treatise and that there are ideas and concepts in his natural philosophy which might have been influenced directly by this dietetic text.

2 Aristotelian Reflections

Aristotle, the son of an elite Macedonian physician and the most influential pupil of Plato, often portrays the physician as a paradigmatic expert. Medicine serves him as an analogue to other fields of expertise including rhetoric, poetics, ethics or politics.⁶³ He sometimes illustrates the works of nature with the skills and achievements of medical experts⁶⁴ but he rarely refers to concrete physicians.⁶⁵ Accordingly, the relation between Aristotle's philosophy and the medical ideas and methods of his predecessors and contemporaries, which are for the most part preserved in the so called *Corpus Hippocraticum*,

62 Cf. Stalley 1996, 370 who speaks about a 'moralized view of medicine' in Plato's *Timaeus*.

63 Cf. Jaeger 1957, Lloyd 1968, Craik 2006.

64 E.g. Aristotle, *PA* 665a8 or *Mete.* 199b31–21.

65 On one occasion Aristotle mentions Hippocrates as the most prominent physician of the day (Aristotle, *Pol.* 1326a15). In the *Historia Animalium* (511b23–30) we find a quotation ascribed to Syennesis, 'the physician of Cyprus', which is identical to a passage in the Hippocratic *On the Nature of Bones* (Oss. 8 = L. 9.174). Another passage quotes the views of Polybus (*HA*, 512b12–513a7), who is commonly identified with the son in law of Hippocrates. Almost verbatim parallels to this passage are to be found in *On the Nature of Bones* (Oss. 9 = L. 9.174–176) and *On the Nature of Man* (*Nat. Hom.* 11, Jouanna 192.15–196.15 = L. 6.58–60). It is remarkable that in these two exceptional passages in the *Historia Animalium* Aristotle strongly disagrees with the quoted authors, while at other places where he seems to be in agreement with medical authorities (examples of such passages will be discussed below) he does not mention their names and refers to them exclusively in the plural, as if their knowledge were conceived as collective and anonymous.

has been investigated by modern scholars from various points of view and with markedly different conclusions. On the one hand, since F. Poschenrieder's pioneering study on this topic was published in 1887, many (mainly Hippocratic) scholars have considered Aristotle as 'an attentive reader of Hippocrates'⁶⁶ and dozens of Hippocratic passages have been suggested as possible sources of information and inspiration for Aristotle's own thoughts.⁶⁷ On the other hand, in Aristotle's naturalistic treatises, with remarkably few exceptions, physicians are not mentioned by name, and only a few verbatim parallels can be found in the extant Hippocratic treatises.⁶⁸ Accordingly, some scholars have rejected Poschenrieder's conclusions⁶⁹ and adopted a radically sceptical position, proposing that Aristotle was probably unacquainted with the Hippocratic writings that we have today and that he was actually not at all interested in the medical discussions of that time.⁷⁰ Despite the fact that Hippocratic scholars, especially in recent decades, have provided enough evidence to make such a sceptical position hardly defensible, contemporary Aristotelian scholars unfortunately do not pay much attention to their arguments and, therefore, rarely take Hippocratic sources into consideration as a relevant background for interpreting Aristotle's ideas.

Let me start with an example of recent scholarship suggesting that Aristotle could be referring to the account of *On Regimen*. At the beginning of *On Prophecy in Sleep* Aristotle questions whether it is true that some dreams

66 Jouanna 1999, 231.

67 After Poschenrieder 1887, 57–59, the most systematic contributions were presented by Byl 1980, 41–42, 46, 51, 53, 62, 73, 78–80, 89, 140, 148, 157, 162–163, 172, 249, 278, 281, 289 and Oser-Grotte 2004, 19, 248, 262, 277, 279, 280, 283. A number of parallels between Aristotle's zoological works and *On Regimen* were indicated by Peck in his Loeb editions of Aristotle (Peck 1937, 37–39, 64, 118, 136, 370; Peck 1942, lvii, lxvi, 228, 390, 398, 400, 476, 526) and reiterated by Preus 1975, 272. Lefèvre 1972, 183–214 collects abundant evidence of the close resemblances between *On Regimen* and Aristotle's concept of the nutritive soul and innate heat, particularly as presented in the *Parva Naturalia*. Van der Eijk discusses in detail some parallels in Aristotle's *On the Generation of Animals* (Van der Eijk 2007), and persuasively relates the fourth book of *On Regimen* to Aristotle's *On prophecy in sleep* (van der Eijk 1995 and van der Eijk 2005, 169–205).

68 Cf. Oser-Grote 2004.

69 Cf. Fredrich 1899, 9 n. 4.

70 Cf. Fredrich 1899, 78–80: 'Es macht den Eindruck als ob der grosse Philosoph in stolzer Abgeschlossenheit auf den medicinischen Kenntnissen des ausgehenden fünften Jahrhunderts weiterbaute und ohne Anatomie seine Spekulationen gründete, indem er sich um die Errungenschaften gleichzeitiger und etwas älterer Aerzte nicht kümmerte... Wie Plato nicht kennt, so haben Aristoteles und der Peripatos die zeitgenössische Medizin unbeachtet gelassen.' See also Balme 1991, 11 and Sarton 1953, 537.

are causes and other signs, e.g. with regard to ‘things happening around the body’. He clearly acknowledges that his own ideas about the diagnostic value of dreams can be supported by the views of some medical authorities, when he says:

At any rate also distinguished (χαρίεντες) physicians say that close attention should be paid to dreams. And it is reasonable for those to think so, too, who are not specialists, but inquire the matter to a certain extent and have a general interest.⁷¹

As suggested by van der Eijk, the term χαρίεντες probably refers to those physicians who are distinguished or sophisticated in comparison to the mere practitioners without theoretical interests.⁷² It is obvious that Aristotle has in mind specific authors and their doctrines, which actually provides a rare example of opinions which met with Aristotle’s sympathy.⁷³ Focussing on the Hippocratic authors, a number of them recognized the prognostic value of dreams⁷⁴ but the only extant theoretical account of dream diagnosis is to be found in the fourth book of *On Regimen*, which is wholly devoted to the topic and which opens with the claim that ‘he who has gained a correct understanding about the signs that come in sleep, will find that they have an important influence upon all things’.⁷⁵ So it is not surprising that a number of scholars have noticed this similarity and considered the possibility that Aristotle refers here directly to *On Regimen*.⁷⁶ Van der Eijk concludes that it is ‘plausible’ that Aristotle knew this treatise, that ‘the author’s approach must have appealed to Aristotle for the very fact that the interest of dreams is that they show the *causes* of

71 Aristotle, *Div. somn.* 463a3–7, ed. Ross, trans. van der Eijk): ἄρ’ οὖν ἐστὶ τῶν ἐνυπνίων τὰ μὲν αἴτια, τὰ δὲ σημεῖα, οἷον τῶν περὶ τὸ σῶμα συμβαινόντων; λέγουσι γοῦν καὶ τῶν ἰατρῶν οἱ χαρίεντες ὅτι δεῖ σφόδρα προσέχειν τοῖς ἐνυπνίοις· εὐλογον δὲ οὕτως ὑπολαβεῖν καὶ τοῖς μὴ τεχνίταις μὲν, σκοπουμένοις δὲ τι καὶ φιλοσοφοῦσιν.

72 The difference between *technitai* and *philosophountes*, as van der Eijk 1995, 448 suggests, ‘signifies a distinction between knowledge being pursued with a view to its *use* or application in a particular case, and knowledge being pursued for its own sake’. Cf. Aristotle, *Metaph.* 981a12–b14, where experts (and paradigmatically medical experts) are divided into *architektones* (‘master craftsmen’) and *cheirotechnai* (‘handworkers’). On social aspects of this division see van der Eijk 1995, 451 n. 18 and Kudlien 1985.

73 Van der Eijk, 1995, 457.

74 Cf. Joly-Byl 2003, 296 and van der Eijk 1994, 279.

75 *Vict.* 4.86 (Joly-Byl 218.3–4 = L. 6.640), trans. Jones: Περὶ δὲ τῶν τεκμηρίων τῶν ἐν τοῖσιν ὑπνοῖσιν ὅστις ὁρθῶς ἔγνωκε, μεγάλην ἔχοντα δύναμιν εὐρήσει πρὸς ἅπαντα.

76 Cf. von Wijsenbeek-Wijler 1976, 236 and Byl 1979, 257.

disease', and that the author of *On Regimen* 'certainly meets Aristotle's requirements for being a *charieis iatros*'.⁷⁷ So, there is a hypothetical possibility that Aristotle was acquainted with the Hippocratic treatise, but this hypothesis is not yet sufficiently well-grounded to allow us to accept it without considerable reservations.

Accordingly, the first task I have set for myself in the following discussion is to present arguments in support of this hypothesis. For these purposes, I shall focus on Aristotle's concept of innate heat and the related image of the kindled soul and argue that a number of passages in *Parva Naturalia*, *On the Soul*, *On the Parts of Animals*, and possibly in other treatises as well,⁷⁸ provide firmer evidence for concluding that Aristotle was acquainted with *On Regimen*. My second task is to illustrate how a comparison of Aristotle's accounts with this and other Hippocratic treatises can shed new light on Aristotle's own conceptions, which he often, as in the passage from *On Prophecy in Sleep*, introduces against the background of an already existing tradition. This task will be accomplished partly within the discussion of the concept of innate heat, and partly with the help of my second topic. In the second part of this section I will focus on the concept of self-organizing and self-healing *phusis*, which we find in *On Regimen* as well as several other Hippocratic treatises and which in a way anticipates Aristotle's principle of natural teleology. Since Aristotle interprets most natural processes teleologically, it is rather surprising that he is much more cautious about admitting cases of natural self-healing, and instead treats the majority of these cases as something accidental or non-teleological.

During my investigations into the parallels between Aristotle and *On Regimen* I came across a misleading suggestion, which was originally caused by a typo in the Oxford edition of Aristotle's *Parva Naturalia* by D.W. Ross. Given

77 Van der Eijk 2005, 198.

78 In what follows I will pay only minimal attention to the evidence of Aristotle's *On the Generation of Animals*, which could, I believe, provide further evidence for the hypothesis that Aristotle read and drew on *On Regimen*. But taking account of this evidence would mean including in my discussion one of the most complicated and obscure of Aristotle's ideas, namely the concept of innate *pneuma*, which Aristotle combines in *On the Generation of Animals* with the concept of innate heat. Concerning the concept of *pneuma*, Rist 1989, xvii recalls A.L. Peck assuring him that if one could begin to understand *pneuma*, one would begin to 'understand Aristotle'. Hence, to paraphrase this remark and to accommodate it in our discussion, let me propose that if we could begin to understand the role of innate heat (σύμφυτος θερμότης), which I discuss in the next section, we might understand a little better also Aristotle's concept of *pneuma*.

the fact that this edition still commonly serves as the standard point of reference for the Greek text of the treatises, that the misprint keeps reappearing in all reprints of the edition since 1955, and that the misinterpretation based on this misprint is still occasionally used as a piece of evidence in discussions on the relation between Aristotle and *On Regimen*, I supply a short appendix which aims at clarifying this unfortunate story.

2.1 *Innate Heat and the Kindled Soul*

There is no doubt that the concept of innate heat played a crucial role in Aristotle's accounts of the generative and nutritive faculties of soul and became a standard theory in the Aristotelian tradition. Aristotle discusses this concept in *On the Soul*, *On the Parts of Animals*, *Meteorology* (book 4), in several of the short treatises traditionally called *Parva Naturalia*, in *On the Generation of Animals* and elsewhere,⁷⁹ and on several occasions explicitly links this concept with some of his predecessors. Assuming that understanding the intellectual context on which Aristotle drew and towards which he directed his criticism is a necessary precondition for understanding Aristotle's own thought, it is surprising that *On Regimen* and other Hippocratic treatises have been largely neglected in recent discussions of the topic. This is also the case with the rare but significant image of the kindled soul, which Aristotle introduces several times in this context and which deserves special attention.

There are a number of passages in the Hippocratic treatises which presuppose some version of the concept of innate fire or heat.⁸⁰ Two Hippocratic

79 There are terminological variations in Aristotle's accounts, as he speaks not only about σύμφυτος θερμότης (*GA* 784b7, *Somn. Vig.* 458a27, pseudo-Aristotle, *Pr.* 860a34, 883a7, 909b16, 949b4), ἔμφυτος θερμότης (*Mete.* 355b9–10), even σύμφυτος θερμότης φυσική (*Juv.* 469b7–8), but also about θερμότης φυσική (*PA* 650a14), ἡ ἐντὸς θερμότης (pseudo-Aristotle, *Pr.* 869a15), ἡ οἰκεία θερμότης (*PA* 648b36–37, *Mete.* 379a14–26, 379b21–25, 380a1–6), θερμότης ζωτική (*GA* 739b23, *Resp.* 473a9–10), φύσεως θερμότης (*PA* 648a27), θερμότης ἐν τοῖς ζώοις (*PA* 651a11–12), θερμότης ψυχική (*GA* 732a18–19), φυσικὸν πῦρ (*Resp.* 474b13), τὸ ἐντὸς πῦρ (*Resp.* 473a4), ψυχικὸν πῦρ (*Resp.* 478a16–17), or simply πῦρ (*PA* 652b7–16) or θερμόν (*DA* 403b1 and 416b29). For the purposes of my interpretation I will suppose that all these expressions refer more or less to the same concept.

80 In the Hippocratic *Aphorisms* we find the expression ἔμφυτον θερμόν twice (*Aph.* 1.14 = L. 4.466.8, 1.15 = L. 4.466.15), the author of the *Use of Liquids* mentions οἰκεῖον θάλλπος (*Liqu.* 2 = L. 6.122.2), in the *On the Art of Medicine* we read about σύντροφον πῦρ (*De arte* 12, Jouanna 240.14 = L. 6.24.10, ms. M reads πῦρ, while Jouanna prefers ms. A: πυοῦ, interpreted as πύου), in *On the Heart* ἔμφυτον πῦρ is mentioned (*Cord.* 6 = L. 9.84.9), and in chap. 13 of *On Sevens*, which has been preserved only in a Latin translation, we read 'originale calidum' (*Hebd.* 13 = L. 8.640.4–5).

authors even explicitly use the expression *σύμφυτον θερμόν*,⁸¹ and three authors mention 'kindling' or 'burning' soul or sperm.⁸² This evidence suggests that these ideas were not uncommon among the medical authors of that time but it is the evidence of *On Regimen* that is fundamental.

The relation between Aristotle's concept of 'innate heat' and *On Regimen* has been most powerfully (but not entirely convincingly) addressed in 1972 by Charles Lefèvre.⁸³ While adopting a developmentalist approach to Aristotelian psychology, Lefèvre concluded that the early Aristotle was initially inspired by the concept of fire in *On Regimen* and then later revised his own view, developing the hylomorphic theory and criticizing the same concept in his mature works, especially in *On the Generation of Animals*, *On the Parts of Animals* and *On the Soul*. Assuming that Aristotle (or possibly some later editor) had the intention and the opportunity to hide his commitments to this source, Lefèvre suggests that in most of Aristotle's texts all the traces of his earlier intellectual period have been swept away, with *On Youth and Old Age* standing as a remarkable exception. The ideas borrowed from *On Regimen* were 'too deeply embedded in the context' of the treatise, and therefore Aristotle's premature expositions of the role of fire remained there unrevised.⁸⁴ Lefèvre's main suggestions were rashly dismissed as improbable by Joly and Byl in the CMG edition of the Hippocratic text published in 1984⁸⁵ and, to my knowledge, they have neither been accepted in Aristotelian scholarship⁸⁶ nor discussed in detail since that time. Even though there are obviously some points in Lefèvre's

81 *Morb.* 1.11 (L. 6.158.19), and *Vict.* 2.62 (Joly-Byl 184.23–24 = L. 6.576).

82 *Vict.* 1.9 (Joly-Byl 132.13–14 = L. 6.482), 1.25 (Joly-Byl 142.9–11 = L. 6.498), 1.29 (Joly-Byl 146.11–16 = L. 6.504), *Epid.* 6.5.2 (Manetti-Roselli 106.1–2 = L. 5.314.14–15), *Aph.* 5.63 (L. 4.556.3–7). Concerning the analogy between the soul and burning coals, we should also mention Aristophanes (*Nu.* 97) mocking of the idea that men ('we') should be identified with coals. According to a scholiast (DK 38 A 2 = Scholia Aristophan. *Ven. ad. Nub.* 94 ff.) this mockery was addressed to Hippo.

83 Lefèvre 1972, 182–214.

84 Lefèvre 1972, 198.

85 Joly and Byl (2003, 254) in their reflection on Lefèvre's suggestions briefly point out that there is a difference between Aristotle's kindled soul and the soul in *On Regimen* 'which is fire but also water'. Even though this observation is considered already by Lefèvre (1972, 208) and actually provides no evidence against his interpretation, they take it as sufficient to denounce his hypothesis as 'very doubtful'.

86 To provide some representative examples, none of the following commentators on Aristotle takes *On Regimen* into consideration, even though all of them comment on passages discussed by Lefèvre in connection with this Hippocratic treatise: Freudenthal 1999, Lennox 2001, King 2001, Bos 2003, Polansky 2007, Kullmann 2007.

interpretation which can be criticized justly,⁸⁷ he contributes several notable insights still pertinent to the discussion.⁸⁸

Accordingly, in order to re-evaluate the relevance of *On Regimen* for our understanding of Aristotle's own concepts of the vegetative soul, innate heat and related topics, I shall proceed in my discussion as follows. First I briefly summarize my reading of the concepts of soul, fire and water in *On Regimen*. Then I turn to Aristotle and examine several relevant passages in *On the Soul*, *On the Parts of Animals* and, finally, in *Parva Naturalia*.

When announcing the most elementary requirements for a satisfactory account of dietetics in the second chapter, the author of *On Regimen* assumes that whoever wants to write properly on regimen must first acquire knowledge of human nature in general. This presupposes a clear determination of its primary constituents (ἀπὸ τίνων συνέστηκεν ἐξ ἀρχῆς) and defining their mutual relations in terms of dominance (ὑπὸ τίνων μερέων κεκράτηται),⁸⁹ as well as

87 For instance, Joly and Byl (2003, 254) criticize Lefèvre for assuming that sperm serves in *On Regimen* as a 'vehicle' of the 'vegetative' soul. As a matter of fact, this anachronism and evident shortcoming of Lefèvre's interpretation is actually a rather unimportant detail for our discussion. Another possible objection is that he overestimated, as I will try to demonstrate, the difference between Aristotle's concepts presented in *On Youth and Old Age* and those in the other treatises, as well as the uniqueness of the concept of σῶμφυτον θερμόν in *On Regimen*. There is at least one more Hippocratic passage attesting the expression σῶμφυτον θερμόν which escaped Lefèvre's attention, namely *Morb.* 1.11 (Potter 120.20–122.6 = L. 6.158.13–20), trans. Potter: 'Patients that suppurate in the lung or in the upper or lower cavity, or have tubercles in the upper or lower cavity or the lung, or have ulcers internally, or vomit blood or expectorate it, or have pains in the chest or the back suffer all these either from things inside the body, bile and phlegm, or from things outside it: from air being mixed with the natural heat, or also from exertions and wounds.' ('Ὅσοι ἔμψυτοι γίνονται τὸν πλεῦμονα ἢ τὴν ἄνω ἢ τὴν κάτω κοιλίην, ἢ φύματα ἴσχουσιν εἶτ' ἐν τῇ ἄνω κοιλίῃ εἶτ' ἐν τῇ κάτω ἢ ἐν τῷ πλεῦμονι, ἢ ἔλκεα εἴσω, ἢ αἷμα ἐμέουσιν ἢ πτύουσιν, ἢ ἀλλήγημά τι ἔχουσιν εἶτ' ἐν τοῖσι στήθεσιν εἶτ' ἐν τοῖσιν ὀπισθεν [ἐν τῷ νώτῳ], πάντα ταῦτα ἴσχουσι, τῶν μὲν ἐν τῷ σώματι ἐνεόντων, ἀπὸ χολῆς καὶ φλέγματος, τῶν δ' ἔξωθεν, ἀπὸ τοῦ ἡέρος ἐπιμιγνυμένου τῷ συμφύτῳ θερμῷ, ἀτὰρ καὶ ἀπὸ πόνων καὶ τραμάτων.)

88 E.g. that Aristotle shared with the Hippocratic author the view that 'the soul exercises its function when being kindled' and that it 'lives in the fire' (Lefèvre 1972, 208). As for the similarities between *On Regimen* and *On the Generation of Animals*, which I do not discuss in detail for the reasons mentioned above (p. 244, n. 78), Lefèvre suggests that both authors describe the nature of sperm and its emission by means of fire, water and breath, which is—according to Lefèvre—a triad attested in this context nowhere else before Aristotle. Moreover, both authors believe that males are warmer and dryer than females, both evoke the activity of carpenters when illustrating generation, and both use the expression *organa* alternately for tools and for human organs (Lefèvre 1972, 210–211).

89 *Vict.* 1.2 (Joly-Byl 122.23–24 = L. 6.468).

taking into consideration other factors influencing the human condition, such as the powers of foods and drinks. In response to these methodological demands, the author introduces in chap. 3 fire and water as the elements by which all living beings are formed and maintained. He claims there that man and all the other animals 'are put together' (συνίσταται) by fire and water.⁹⁰ While defining these two elements, he lays stress on the fact that they are 'different in power but working together in their use',⁹¹ which only repeats what has been said about the relation between food and exercise in chap. 2.⁹² Fire and water can therefore be understood as the elemental representations of the most essential capacities for the maintenance of life, i.e. nourishment and movement. Nourishing and moving are viewed as two distinct but complementary capacities by which the two elements cooperate for the sake of a common benefit, which is to live, i.e. to build, develop and sustain living organisms.⁹³ Neither fire nor water can succeed without being counterbalanced by the other, and only in mutual cooperation can they be 'sufficient for one another and for everything else'.⁹⁴ From the methodological point of view, fire and water are supposed to be sufficient principles for explaining the nature of living organisms in general, and human nature in particular, as far as the dietetic theory is concerned.

Anticipating the comparison with Aristotle, it is important to recognize that the Hippocratic author introduces neither a limitless fire as the only principle of natural processes, a position Aristotle ascribes to some of his predecessors, nor fire as the active element in opposition to a passive element of water.⁹⁵ On the Hippocratic account, both fire and water master each other within some limits, expressed by the phrase 'to the greatest maximum and the least minimum' (ἐς τὸ μῆχιστον καὶ τὸ ἐλάχιστον).⁹⁶ Together they create a mixture which includes a principle of self-regulation in the sense that the dominance of one or the other oscillates between some non-exceedable limits.⁹⁷ The idea that fire and water are mutually interdependent principles is further elaborated by characterizing each of them in terms of elemental qualities. Unlike in Aristotle's elemental theory, where each of the four elements (fire, air, water and earth)

90 *Vict.* 1.3 (Joly-Byl 126.5–8 = L. 6.472).

91 *Vict.* 1.3 (Joly-Byl 126.6 = L. 6.472), trans. Jones.

92 *Vict.* 1.2 (Joly-Byl 124.6–7 = L. 6.468–470).

93 *Vict.* 1.3 (Joly-Byl 126.8–11 = L. 6.472).

94 *Vict.* 1.3 (Joly-Byl 126.6–8 = L. 6.472), trans. Jones.

95 Cf. Aristotle, *Mete.* 379a11–16.

96 *Vict.* 1.3 (Joly-Byl 126.10 = L. 6.472, and 126.18–19 = L. 6.474).

97 *Vict.* 1.3 (Joly-Byl 126.11–19 = L. 6.472–474).

is described by two of the four elemental qualities (hot, cold, dry and moist),⁹⁸ according to the author of *On Regimen* each of the two elements is defined by three qualities: fire is hot and dry, but also has some moisture from water, water is moist and cold, but also has some dryness from fire.⁹⁹ Hence, the qualities of moist and dry are shared by both elements, and the accent is thus put on their mutual dependence which constitutes the self-sufficiency and self-regulation of living organisms.

In conformity with many other authors of the time, the author of *On Regimen* marks out the difference between living organisms and non-living objects using the term *psuchē*, as is best illustrated in the analogy between the human body and a statue, where we read that 'statue-makers copy the body without the soul (*psuchē*), as they do not make things having intelligence (*gnōmē*), using water and earth, drying the moist and moistening the dry'.¹⁰⁰ Although both statues and human bodies come into existence through processes of drying and moistening, warming and cooling, which is the essence of this analogy, the difference between the two objects is expressed in terms of *psuchē* and *gnōmē*. As already discussed in the previous chapter, *On Regimen* provides by far the richest evidence amongst the Hippocratic treatises for the term *psuchē*, soul on this account differentiates animate bodies from inanimate, and it is repeatedly said to 'have' a mixture of fire and water.¹⁰¹ Hence, to have a soul means to have a specific mixture of the two interdependent elemental principles maintaining the self-regulation and relative stability between opposing qualities by means of activity and nutrition. In the previous chapter I have also illustrated that the term *psuchē* is often used in *On Regimen* when the author refers to human seeds, of which he identifies several kinds. First of all, there is a male seed and its female counterpart,¹⁰² both contributing to every new human individual. Further, each of these seeds is already determined by gender, hence the male seed is called τὸ ἄρσεν and the female τὸ θῆλυ, and for each of them there are three main subclasses defined according to the prevalence of the male or female element.¹⁰³ When it comes to the idea that the two parental

98 Cf. Aristotle, *GC* 330b3–5. Nevertheless, it should also be remarked that Aristotle, when speaking not only about separate elements but about compound bodies (such as plants and animals), clearly says that these are made of all four qualities, i.e. heat, cold, moist and dry (*Mete.* 384b24–31).

99 *Vict.* 1.4 (Joly-Byl 126.20–23 = L. 6.474).

100 *Vict.* 1.21 (Joly-Byl 140.5–6 = L. 6.494), trans. Jones (modified).

101 *Vict.* 1.7 (Joly-Byl 130.18–19 = L. 6.480) and 1.25 (Joly-Byl 142.6–7 = L. 6.496).

102 *Vict.* 1.27 (Joly-Byl 144.3–5 = L. 6.500).

103 *Vict.* 1.28 (Joly-Byl 144.20–146.4 = L. 6.502).

seeds combine and set up a new individual of certain qualities, the author considers a possible difficulty of his account, namely how two mixtures of fire and water, each forming a specific type of constitution, can combine into one single individual. A solution to this difficulty is introduced in chap. 29 by drawing an analogy with two heaps of burning coals. These, when mixed together, 'will all present a like body, and one will not be distinguished from another, but the whole will be like the body in which they are kindled (ζωπυρέονται).'¹⁰⁴ The way in which the author introduces the analogy with coals ('if anyone doubts that soul combines with soul, let him consider coals...')¹⁰⁵ strongly suggests that the whole picture is only an illustration and that the fire that heats coals is analogical but not identical with the fire that is the principle of life. The verb for kindling (ζωπυρέονται), which will be one of the key words in my comparison with Aristotle, occurs once again in chap. 9, where it clearly describes some physiological process within embryonic development. The author explains what happens with the foetus in the earliest stages of its development in the mother's body, namely that 'it is moist and is kept in movement by the fire', and while being in movement 'it is kindled (ζωπυρείται) and draws to itself its nourishment from the food and breath that enter the woman'.¹⁰⁶ Given the fact that in the following lines the author describes how fire, by means of drying and solidifying, forms and shapes the bodily parts (including 'bones and sinews'),¹⁰⁷ it is reasonable to assume that kindling in this passage describes the very moment when the foetus, after being accommodated ('achieves the attunement') to the conditions in a woman's womb, starts to draw nourishment into itself from the body of its mother.¹⁰⁸

104 *Vict.* 1.29 (Joly-Byl 146.13–15 = L. 6.504), trans. Jones.

105 *Vict.* 1.29 (Joly-Byl 146.11–12 = L. 6.504), trans. Jones.

106 *Vict.* 1.9 (Joly-Byl 132.12–15 = L. 6.482), trans. Jones (modified). Cf. *Carn.* 6 (L. 8.592.11–13), trans. Potter: 'the fetus in the belly continually sucks with its lips from the uterus of the mother and draws nourishment and breath to its heart inside' (τὸ δὲ παιδίον ἐν τῇ γαστρὶ συνέχον τὰ χεῖλεα μύζει ἐκ τῶν μητρώων τῆς μητρὸς καὶ ἔλκει τήν τε τροφήν καὶ τὸ πνεῦμα τῇ καρδίῃ εἴσω).

107 *Vict.* 1.9 (Joly-Byl 132.21 = L. 6.484).

108 It should be remembered that a similar expression (ἐκπυρουμένη) is used in chap. 25 where the author explains why human seed cannot develop in young bodies. The author presupposes that human seeds enter into the bodies of all men and animals who breathe, therefore also into the bodies of children and youths. But since it is a matter of fact that immature individuals do not produce sperm, the author assumes that 'in young bodies, as the revolution is fast and the body growing, it is burnt, becomes thin and is consumed for the growth of the body' (*Vict.* 1.25, Joly-Byl 142.9–11 = L. 6.498: ἐν μὲν τοῖσι νέοις τῶν σωμάτων ἅτε ταχέως εὐόσης τῆς περιφορῆς καὶ τοῦ σώματος αὐξίμου ἐκπυρουμένη

In accordance with the characterization of fire as a principle moving ‘all things always’, all the embryonic processes can be ascribed to the activity of fire: ‘in a word, the fire arranged all things in the body by itself properly’.¹⁰⁹ But when reading these words, we should not forget that fire always depends on the water within the fire-water mixture of each individual, that this mixture can also be identified with soul, and that the possession of soul makes the difference between living organisms and artificial objects (e.g. a statue). As fire takes its nourishment from water, the soul is often said to be nourished by the moisture available in the body.¹¹⁰ The close relation between soul and fire is most explicitly expressed in the passage in chap. 9 where the author claims that ‘the hottest and strongest fire, which controls all things, ordering all things according to nature, is imperceptible to sight or touch; in this there are soul, reason, thought, growth, motion, decrease, mutation, sleep, waking’.¹¹¹ It is significant that not just any kind of fire, but specifically ‘the hottest and strongest’ one, controls and governs ‘all things’. The qualification of this form of fire as something ‘imperceptible to sight or touch’ implies that it is not derivable directly from empirical evidence.¹¹² The concept of vital fire is, rather, an

και λεπτυνομένη καταναλίσκεται ἐς τὴν αὔξησιν τοῦ σώματος; cf. Aristotle, *GA* 766b29–31). Hence it is clear that the verbs ζωπυρέω and ἐκπυρόω designate different and, in regard to their consequences, even opposite processes. While the first suggests kindling, setting a fire, maintaining independent individual life, the other refers to the destructive process of unmoderated fire, which extinguishes the vital capacity of the seed. A closely parallel passage is to be found in the Hippocratic *Epidemics*, where the same verb refers to a pathological state of the soul (*Epid.* 6.5.2, Manetti-Roselli 106.1–2 = L. 5.314.14–15): ‘The soul of man grows until death. If the soul be burnt up with a disease it consumes the body (Ἀνθρώπου ψυχὴ φύεται μέχρι θανάτου· ἣν δὲ ἐκπυρωθῇ ἅμα τῇ νούσῳ καὶ ἡ ψυχὴ, τὸ σῶμα φέρεβεται)’. On the other hand, in the Hippocratic *Aphorisms* we find a rather different meaning of the same verb, but again, as in *On Regimen*, it is related to human seed (or more specifically sperm). The author suggests that male infertility can be caused by coldness, resp. by lack of heat, and explains it as follows: ‘it (i.e. σπέρμα) is not heated so as to collect at this place (ἥ διὰ τὴν ψυχρότητα οὐκ ἐκπυροῦται, ὥστε ἀθροίζεσθαι πρὸς τὸν τόπον τοῦτον)’ (*Aph.* 5.63 = L. 4.556.3–7).

109 *Vict.* 1.10 (Joly-Byl 134.5–6 = L. 6.484).

110 Cf. *Vict.* 2.56 (Joly-Byl 180.11–14 = L. 6.568), *Vict.* 2.60 (Joly-Byl 182.28–30 = L. 6.574), *Vict.* 2.62 (Joly-Byl 184.27–186.2 = L. 6.576–578).

111 *Vict.* 1.10 (Joly-Byl 134.17–20 = L. 6.486), trans. Jones (modified).

112 As the author explains in chap. 4 (*Vict.* 1.4, Joly-Byl 128.1–3 = L. 6.474–476), in contrast to ordinary men who ‘trust eyes rather than mind’, his own approach clearly gives preference to the authority of mind: ‘I expound these things by means of mind’ (trans. Jones). Cf. the Hippocratic *Flat.* 3 (Jouanna 106.9–10 = L. 6.94.8–9) or the spurious Aristotelian work *De spiritu* 482b17–21.

accepted theoretical principle which can comfortably be used to interpret various visible phenomena and hence can serve an explanatory purpose in the dietetic account. As for the ambiguous expression ‘in this’ (ἐν τούτῳ), three points should be made. First, no matter what exactly the author wants to say here, he puts the soul and the fire into a close relationship with each other but does not identify them. Secondly, as I shall discuss below, a similar phrase is used by Aristotle to relate fire to soul. And thirdly, it is not only the soul that is related to the specific kind of fire in this passage, but also other soul capacities (reason and thought) and life activities (growth, motion, decrease, mutation, sleep and waking), that will all be integrated in Aristotle’s concept of soul. Furthermore, as in *On Regimen*, Aristotle’s concept of soul covers the continuity between the growth potential of seeds and embryos and the highest intellectual activities found only in fully matured humans.

Let me conclude the recapitulation of the theories of *On Regimen* with a passage attesting the expression σύμφυτον θερμόν in the treatise. In book 2, chap. 62, within a debate on different kinds of therapeutic walks, their drying effect and use for dietetic purposes, the author asserts:

The drying is caused thus. As the body moves and grows warm, the finest part of the nourishment is either consumed by the innate heat, or secreted out with the breath or by the urine. What is left behind in the body is the driest part from the food, so that the belly and the flesh dry up. Early-morning walks too reduce the body, and render the parts about the head light, bright and of good hearing, while they relax the bowels. They reduce because the body as it moves grows hot, and the moisture is thinned and purged, partly by the breath, partly when the nose is blown and the throat cleared, partly being consumed by the heat of the soul for the nourishment thereof.¹¹³

It is apparent that the innate heat in this passage represents the same agent as the element of fire constituting the nature of all living beings. It should be

113 *Vict.* 2.62 (Joly-Byl 184.22–30 = L. 6.576–578), trans. Jones: ξηραίνεται δὲ διὰ τὰδε· κινεομένου τοῦ σώματος καὶ θερμαινομένου τὸ λεπτότατον τῆς τροφῆς καταναλίσκεται, τὸ μὲν ὑπὸ τοῦ συμφύτου θερμοῦ, τὸ δὲ σὺν τῷ πνεύματι ἀποκρίνεται ἔξω, τὸ δὲ καὶ διουρεῖται· ὑπολείπεται δὲ τὸ ξηρότατον ἀπὸ τῶν σιτίων ἐν τῷ σώματι, ὥστε τὴν κοιλίην ἀποξηραίνεσθαι καὶ τὴν σάρκα. οἱ δὲ ὄρθριοι περίπατοι ἰσχυαίνουσι καὶ τὰ περὶ τὴν κεφαλὴν κοῦφα καὶ εὐ[π]αγέα καὶ εὐήκοα παρασκευάζουσι καὶ τὴν κοιλίην λύουσιν. ἰσχυαίνουσι μὲν, ὅτι κινεόμενον τὸ σῶμα θερμαίνεται καὶ τὸ ὑγρὸν λεπτύνεται καὶ καθαίρεται, τὸ μὲν ὑπὸ τοῦ πνεύματος, τὸ δὲ μύσsetαι καὶ χρέμπεται, τὸ δὲ ἐς τὴν τροφήν τῷ τῆς ψυχῆς θερμῷ καταναλίσκεται.

noted that apart from the philosophical account of human nature in book 1, in the other books (with one exception)¹¹⁴ the author does not mention the elemental constituents at all and generally prefers to speak about heat and moisture and the cooling, warming, moistening and drying capacities of foods, drinks, exercises and other dietetic variables, for which we find numerous parallels in other Hippocratic treatises. The contrast between the precise exposition of the theory of fire and water in book 1, and the rather relaxed usage of the notion of heat in the other three books of *On Regimen*, as well as in several other Hippocratic texts,¹¹⁵ suggests that in book 1 the author attempts to replace this rather common concept of heat with an original and philosophically elaborated elemental theory. On the whole, one can conclude that the Hippocratic author speaks interchangeably about fire and heat, and that he assumes this fire or heat to be 'innate' (σύμφυτον). Furthermore, in our passage he explicitly ascribes this heat to the soul, and thus, while speaking about the soul's heat being nourished by the moisture in the body, he clearly brings together soul, heat and nutrition, for which we have hardly any other pre-Aristotelian evidence.¹¹⁶

2.1.1 Soul and Fire in Aristotle's *On the Soul*

The first book of Aristotle's *On the Soul* is devoted for the most part to the discussion of his predecessors. Since his aim is to adopt those of their theories which were well-grounded, and to be on guard against those which are unsatisfactory,¹¹⁷ he occasionally remarks that some of his predecessors have thought the soul to be identified with fire, but the only thinker explicitly associated with this idea is Democritus with his theory of soul particles.¹¹⁸ After introducing a general definition of the soul and its limitations at the beginning of book 2,¹¹⁹ Aristotle makes a new start to his inquiry and suggests that (a) soul is that which defines living beings and (b) we use the word 'living' in

114 *Vict.* 2.56 (Joly-Byl 178.16–18 = L. 6.566), discussed in chap. 1, pp. 92–94.

115 See above, pp. 245–246 n. 80–81.

116 Menn 2002 has proposed that 'Aristotle is apparently the first philosopher to have invoked a soul in explaining nutrition' (p. 117), and that his thesis that 'the nutritive power is soul' was 'controversial' (p. 120). In the light of the evidence of *On Regimen*, Aristotle's position appears less controversial and his originality among philosophers can only be defended by insisting that the author of *On Regimen* was a physician, or more precisely an author of a dietetic treatise, but not a philosopher. Anyway, Menn does not take *On Regimen* into consideration at all.

117 Aristotle, *DA* 403b20–24. Cf. *Vict.* 1.1 (Joly-Byl 122.13–21 = L. 6.466–468).

118 Aristotle, *DA* 403b31–404a1, 405a5–8.

119 Aristotle, *DA* 412a3–413a20.

many senses, such as intellect, sensation, movement or rest in space, and the movement implied in nutrition and decay or growth.¹²⁰ This leads him to a distinction of the various faculties of the soul and to the conclusion that ‘one must first grasp what each of them is’.¹²¹ The first faculties discussed are nutrition and reproduction, since these are shared by all plants and animals, and in animals they support the higher faculties of animal and human life. The discussion of the vegetative life starts with a surprisingly responsive remark on a theory which Aristotle ascribes to some of his predecessors or contemporaries, and it is obvious that this time he does not have Democritus in mind:

To some thinkers the nature of fire seems by itself to be the cause of nutrition and growth; for it alone of all bodies and elements seems to be nourished and grow of itself. Hence one might suppose that it is the operating principle in both plants and animals. It is in a sense a contributory cause, but not absolutely the cause, which is much more properly the soul; for the growth of fire is without limit, so long as there is something to be burned, but for all things naturally composed there is a limit or proportion of size and growth; this is due to the soul, not to fire, and to the essential formula rather than to matter.¹²²

The idea that the capacity of living organisms to grow out of digested nutrition relies on the activity of the vital heat is absolutely essential for Aristotle,¹²³ and it would, therefore, be very helpful to learn more about these unnamed authors and their theories.¹²⁴ Supposing that they identified the cause of

120 Aristotle, *DA* 412a20–25.

121 Aristotle, *DA* 415a14–16 (ed. Ross).

122 Aristotle, *DA* 416a9–18, ed. Ross, trans. Hett (modified): δοκεῖ δέ τιςιν ἡ τοῦ πυρὸς φύσις ἀπλῶς αἰτία τῆς τροφῆς καὶ τῆς αὐξήσεως εἶναι· καὶ γὰρ αὐτὸ φαίνεται μόνον τῶν σωμάτων [ἡ τῶν στοιχείων] τρεφόμενον καὶ αὐξόμενον, διὸ καὶ ἐν τοῖς φυτοῖς καὶ ἐν τοῖς ζώοις ὑπολάβοι τις ἂν τοῦτο εἶναι τὸ ἐργαζόμενον. τὸ δὲ συναίτιον μὲν πῶς ἐστίν, οὐ μὴν ἀπλῶς γε αἴτιον, ἀλλὰ μᾶλλον ἡ ψυχὴ· ἡ μὲν γὰρ τοῦ πυρὸς αὐξήσις εἰς ἄπειρον, ἕως ἂν ᾗ τὸ καυστόν, τῶν δὲ φύσει συνισταμένων πάντων ἔστι πέρας καὶ λόγος μεγέθους τε καὶ αὐξήσεως· ταῦτα δὲ ψυχῆς, ἀλλ’ οὐ πυρὸς, καὶ λόγου μᾶλλον ἢ ὕλης.

123 Cf. Aristotle, *DA* 416b28–29.

124 Hamlyn 1968, 97 and Seidl 1995, 115 suggest that Aristotle refers here to Heraclitus. Menn 2002, 117 assumes that Aristotle reflects a ‘Heraclitian, but widely shared’ theory of digestive fire involving two terms: ἡ τροφή, nourishment or food, and τὸ τρεφόμενον, what is nourished or fed. Aristotle’s novelty, Menn believes, rests in inserting the soul into the process and hence operating with ‘at least three terms’ (*DA*, 416b20–23): τὸ τρεφόμενον, what is nourished or fed, i.e. the ensouled body, ᾧ τρέφεται, that by which or with which

‘nutrition and growth’ with fire, and only with fire, Aristotle immediately indicates a possible objection to such an assumption, namely that fire itself does not have any self-limiting capacity, which in his view necessarily belongs to all living organisms. So far nothing suggests any closer link with the theory of fire in *On Regimen*, but it is at least obvious that Aristotle has in mind some similar concept. Actually it is his improvement upon the theory of fire which brings us closer to the Hippocratic concept, where, as we have seen, the accent was laid on the fact that the capacity of fire is limited or counterbalanced by water, an additional and clearly defined principle.¹²⁵ Aristotle’s solution is, of course, considerably different from the Hippocratic one, but in essence it goes along the same lines, at least in the sense that he tries to resolve the very same problem. Applying his causal terminology, Aristotle clearly qualifies the role of fire as ‘a contributory cause (συναίτιον)’, while ‘the absolute cause (ἀπλῶς αἷτιον)’ is ascribed to soul, which provides this fire with a limit and proportion (πέρας καὶ λόγος) in size and growth.

Concerning Aristotle’s account of the nutritive capacities of soul in the second book of *On the Soul*, one further notable parallel with the Hippocratic account has to be mentioned. A few lines after the passage we have just read, Aristotle argues that food and that which is fed are contraries, but in order to make clear that these contraries do not feed each other mutually, he illustrates them with fire and water:

But not even the things mentioned seem to be food for each other in the same way; water feeds fire, but fire does not feed water.¹²⁶

The idea that fire is fed by water and that water nourishes fire is one of the essential presuppositions of the account in *On Regimen* and to my knowledge there is no other parallel attesting the same idea before Aristotle.¹²⁷ And this

it is nourished or fed, i.e. the nutrition, and τὸ τρέφον, what nourishes or feeds it, i.e. the nutritive soul (Menn 2002, 119). With respect to the evidence of *On Regimen*, where at least three terms including soul can be identified in the process of nutrition (cf. in the passage in chap. 62 quoted above), Aristotle’s contribution should not be taken as radically innovative, but rather as clarifying and particularizing already existing theory.

125 *Vict.* 1.3 (Joly-Byl 126.8–19 = L. 6.472–474).

126 Aristotle, *DA* 416a25–27, ed. Ross, trans. Hett: φαίνεται δ’ οὐδ’ ἐκεῖνα τὸν αὐτὸν τρόπον ἀλλήλοις εἶναι τροφή, ἀλλὰ τὸ μὲν ὕδωρ τῷ πυρὶ τροφή, τὸ δὲ πῦρ οὐ τρέφει τὸ ὕδωρ.

127 Kirk 1954, 26 is convinced that the idea that fire fed on water ‘is probably present in Heraclitus’ and that it was a ‘widespread and doubtless almost prehistoric concept’, but he does not provide any evidence for such a view. The lack of evidence evidently poses problems for the modern commentators on this passage: some of them pass it without

is not the only passage where Aristotle discusses such a peculiar concept. In the *Meteorology* he insists that ‘moisture is the only food of fire’,¹²⁸ and in the *Magna moralia*, if it is an authentic work, he even mentions the need to maintain a symmetry between the two elements in terms of the dominance of one over the other.¹²⁹ Another significant analogy is to be found in the *On Length and Shortness of Life*, where fire and water are mentioned as principles with

comment (e.g. Seidl 1995), others merely speculate about its meaning, without drawing on any textual support. Hamlyn 1968, 97, for instance, assumes that fire is fed by water ‘perhaps because you need wood that is not too dry to keep a fire going’. Polansky 2007, 214 believes that the example of water feeding fire can have various instantiations: ‘for example, the heat of a compost pile requires moisture, oil is a kind of watery substance that burns easily, and wood that has some moisture keeps the fire going’. I am afraid that these speculations are missing the crucial difference between the heat of living organisms and the fire as a physical process, which was recognized both by Aristotle and the author of *On Regimen*.

- 128 Aristotle, *Mete.* 355a5, ed. Fobes: τὸ δ’ ὑγρὸν τῷ πυρὶ τροφὴν εἶναι μόνον. It is most probable that similar ideas were relatively common in the pre-Aristotelian tradition, but, as a matter of fact, apart from *On Regimen* it is very difficult to find any authentic evidence for their more precise formulations. Aristotle seems to ascribe a similar idea already to Thales, who according to the account in *Metaphysics* posited water as the material principle for the following reasons: ‘getting the notion perhaps from seeing that the nutriment of all things is moist, and that heat itself is generated from the moist and kept alive by it (and that from which they come to be is a principle of all things)’ (Aristotle, *Metaph.* 983b22–27, ed. Ross, trans. Ross (rev. Barnes): λαβὼν ἴσως τὴν ὑπόληψιν ταύτην ἐκ τοῦ πάντων ὁρᾶν τὴν τροφὴν ὑγράν οὖσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γιγνόμενον καὶ τούτῳ ζῶν). But the wording of this report suggests that it is Aristotle’s own conjecture rather than Thales’ original explanation. As will be discussed below, it is actually Aristotle who believes that life itself is of a moist and warm nature and that this concept is obviously derivable from experience (*Long.* 466a20, ed. Ross: φαίνεται γὰρ οὕτως). In *DA* (405b3) Aristotle makes a similar inference in his report on Hippo. Cf. also *GA* (767a32–33) where we read that water supplies nourishment ‘in everything, even in solid substances’ (trans. Peck).

- 129 Aristotle, *MM* 1210a16–23, ed. Susemihl, trans. Armstrong: ‘For if you choose to regard fire and water as of all things most utterly opposed, yet are they profitable the one to the other. Fire, we are told, apart from moisture dies down; since the latter supplies it with a kind of nourishment, which must, however, be no more than it can overcome; for if we supply the moisture in excess, it will overcome the fire and cause it to die down; only in right proportion will it be profitable to it. It is clear, then, that even between things most utterly opposed there springs up friendship based on profit’ (καὶ γὰρ εἰ θέλεις τὰ ἐναντιώτατα ποιῆσαι πῦρ καὶ ὕδωρ, ταῦτα ἀλλήλοις χρήσιμα εἰσίν. τὸ γὰρ πῦρ φασίν, ἐὰν μὴ ἔχῃ ὑγρὸν, φθείρεσθαι, ὥς τοῦτ’ αὐτῷ παρασκευάζον ὥσπερ τροφὴν τινά, ταύτην δὲ τοσαύτην, ὅσης κρατήσκειν [<]ἄν[>]. ἂν μὲν γὰρ πλεῖον ποιήσης τὸ ὑγρὸν, ἐπικρατήσαν [<]ποιήσει[>] φθείρεσθαι τὸ πῦρ, ἐὰν δὲ σύμμετρον, συνοίσει. δῆλον οὖν ὅτι καὶ ἐν τοῖς ἐναντιωτάτοις φιλία ἐγγίνεται διὰ τὸ συμφέρον.)

different capacities which are the reciprocal causes of each other's generation and destruction.¹³⁰

2.1.2 Soul and Fire in *On the Parts of Animals*

In *On the Parts of Animals*, book 2, chap. 7 Aristotle discusses the function of the brain and argues that its function is to counterbalance the innate heat produced in the heart and thus to preserve the animal organism as a whole. After indicating some physiological features of the brain and before discussing its function, he inserts a passage which does not mention the brain and which should be considered rather as a digression explaining the function of the innate heat. This digression with its immediate context reads as follows:

Rather it [i.e. the brain] is present in animals for the preservation of their entire nature. For while some crudely posit fire or some such potential to be the animal's soul, it is perhaps better to say that soul is constituted in some such body. This is because among bodies the hot is the one most able to assist with the functions of the soul; for nourishing and producing change are functions of soul, and these things come about most of all through this potential. Saying fire is the soul, then, is like saying the saw or auger is the carpenter or carpentry because the function is accomplished when they are near each other. That animals must partake of heat is clear from these considerations; and since everything requires an opposing counterweight in order that it achieve the moderate state and the mean (for the mean possesses substantial being (*ousia*) and the defining account (*logos*), while each of the extremes separately does not)—because of this nature has devised the brain in relation to the heart's location and heat. And it is for the sake of this that this part, with the combined nature of earth and water, is present in animals.¹³¹

130 Aristotle, *Long*, 465a13–16, ed. Ross: Δεῖ δὴ λαβεῖν τί τὸ εὐφθαρτον ἐν τοῖς φύσει συνεστῶσι καὶ τί τὸ οὐκ εὐφθαρτον. πῦρ γὰρ καὶ ὕδωρ καὶ τὰ τούτοις συγγενή, οὐκ ἔχοντα τὴν αὐτὴν δύναμιν, τυγχάνει γενέσεως καὶ φθορᾶς αἰτία ἀλλήλοις... Cf. *Vict.* 1.3 (Joly-Byl 126.5–8 = L. 6.472) and 2.56 (Joly-Byl 178.17–18 = L. 6.566).

131 Aristotle, *PA* 652b6–23, ed. Louis, trans. Lennox (modified): 'Υπάρχει δ' ἐν τοῖς ζώοις πρὸς τὴν τῆς φύσεως ὅλης σωτηρίαν. Οἱ μὲν γὰρ τοῦ ζώου τὴν ψυχὴν τιθέασιν πῦρ ἢ τοιαύτην τινὰ δύναμιν φορτικῶς τιθέντες· βέλτιον δ' ἴσως φάναι ἐν τοιούτῳ τινὶ σώματι συνεστάναι. Τοῦτου δ' αἴτιον ὅτι τοῖς τῆς ψυχῆς ἔργοις ὑπηρετικώτατον τῶν σωμάτων τὸ θερμόν ἐστιν· τὸ τρέφειν γὰρ καὶ κινεῖν ψυχῆς ἔργον ἐστί, ταῦτα δὲ διὰ ταύτης μάλιστα γίνεται τῆς δυνάμεως. "Ομοιον οὖν τὸ τὴν ψυχὴν εἶναι φάναι πῦρ, καὶ τὸ πρίονα ἢ τρύπανον τὸν τέκτονα ἢ τὴν τεκτονικὴν, ὅτι τὸ ἔργον περαίνεται ἐγγὺς ἀλλήλων οὕσιν. "Οτι μὲν οὖν θερμότητος τὰ ζῶα μετέχειν ἀναγκαῖον, δῆλον ἐκ τούτων. Ἐπεὶ δ' ἅπαντα δεῖται τῆς ἐναντίας ῥοπῆς, ἵνα τυγχάνῃ τοῦ μετρίου καὶ τοῦ μέσου (τὴν

Aristotle starts his digression with a reference to ‘some who maintain’ (οἱ μὲν γὰρ... τιθέασι) that soul is fire, and comments that this is a crude way (φορτικῶς) to put it. He suggests an improvement (βέλτιον δ’ ἴσως) to their thesis, which clearly indicates that he draws on a specific concept presented by some of his predecessors. Instead of identifying the soul with fire he suggests that it is better to say that soul ‘is constituted’ or ‘subsists’ in such a body (ἐν τοιούτῳ τινὶ σώματι συνεστάναι), a phrase providing a close parallel with the expression ἐν τούτῳ in *On Regimen* which connects soul with ‘the hottest and strongest fire’. Also the two characteristic activities of soul mentioned in this passage (i.e. to nourish and to cause motion) remind us of the essential life capacities ascribed to water and fire in the Hippocratic account, as has been noted by A.L. Peck and Ch. Lefèvre.¹³² Moreover, there is an additional similarity between the two accounts not mentioned by either of the scholars, namely that the examples of sawing and auger boring, illustrating the works of fire and water, are fundamental for the account in *On Regimen* and are most probably specific to this particular treatise.¹³³

In the next sentence, where Aristotle seems to turn his attention away from his precursors¹³⁴ and back to his original topic, i.e. to the discussion of the brain, he captures perfectly the essence of the account in *On Regimen* concerning the balance between fire and water. The idea that living organisms need

γὰρ οὐσίαν ἔχει τοῦτο καὶ τὸν λόγον, τῶν δ’ ἄκρων ἑκάτερον οὐκ ἔχει χωρὶς), διὰ ταύτην τὴν αἰτίαν πρὸς τὸν τῆς καρδίας τόπον καὶ τὴν ἐν αὐτῇ θερμότητα μεμηχανῆται τὸν ἐγκέφαλον ἢ φύσις, καὶ τούτου χάριν ὑπάρχει τοῦτο τὸ μόριον τοῖς ζῴοις, τὴν φύσιν ἔχον κοινήν ὕδατος καὶ γῆς.

¹³² Peck 1937, 38–39, Lefèvre 1972, 191.

¹³³ For details of this account see chap. 2, pp. 145–151. As far as I am aware, *On Regimen* is the only extant pre-Aristotelian text employing both these craft analogies together in order to illustrate the physiological processes of the human body.

¹³⁴ Supposing that Aristotle adopts these craft analogies directly from *On Regimen*, the way he employs them in his own account is rather striking at first sight but becomes more easily comprehensible upon closer inspection. Aristotle might assume that soul and fire are conceived as more or less identical on the predecessor’s account, which is not an appropriate reading of the text of *On Regimen*, as I have tried to demonstrate above, but it serves his own purposes well. Since he himself identifies the principle counterbalancing fire with soul, not with water, it is not surprising that he posits only one carpenter rather than the two that are implied in the Hippocratic analogies. Assuming that the carpenter’s activity illustrates the operation of fire alone, and that there is a difference between the craftsman and his tool, there must also be a difference between soul and fire. On this reading it is ‘like saying that the craftsman, or his craft, is the saw or the auger which he uses, on the ground that the activity is performed while the two (i.e. the craftsman and his instrument) are near together’. (Cf. Aristotle, *EE* 1242a13–19, where saw and auger are mentioned again together in order to illustrate the relation between a craft and its instruments).

to keep a moderate balance between opposites, and that this balance cannot be achieved by any of the opposites apart from each other (τῶν δ' ἄκρων ἐκάτερον οὐκ ἔχει χωρίς), seems to follow very closely what we have read in *On Regimen* about fire and water, which are sufficient only when found together but not when they are apart from each other (ταῦτα δὲ συναμφοτέρα αὐτάρκεά ἐστι... ἐκάτερον δὲ χωρίς οὔτε...).¹³⁵ Compared with the Hippocratic account, Aristotle's novelty, here as well as in the passage in *On the Soul* (416a9–18) discussed above, is partly terminological and partly conceptual. Terms such as *ousia* and *logos*, which are often used by Aristotle to define soul, did not belong (in this sense) to the Hippocratic vocabulary and can be seen as Aristotle's terminological contribution to the debate. Aristotle's conceptual innovation consists in specifying the seat of innate heat, which he locates in the heart,¹³⁶ an organ never mentioned in *On Regimen*. It should also be noted that a few lines after the this passage Aristotle explains that fluxes (of blood and nourishment) occur when the parts around the brain are colder than the 'rightly proportioned mixture',¹³⁷ which reminds us again of the crucial conception of *On Regimen*.¹³⁸ The discussion of these fluxes concludes with a reflection on the limits of natural philosophy ('to the extent that it is up to the natural philosopher to speak about them') and a reference to more specialized literature ('the appropriate place to speak about these things is in the discussions of the origins of diseases').¹³⁹

Within the discussion of the function of the heart and related organs in book 3, chap. 7, there is one more passage which reveals remarkable similarities with *On Regimen*. It reads as follows:

Now heart and liver are necessary to all animals, the heart because there must be an origin of heat (for there is need of something like a hearth, in which lies the spark of the animal's nature, and that it be well guarded, being as it were an acropolis of the body)...¹⁴⁰

135 *Victr.* 1.3 (Joly-Byl 126.6–8 = L. 6.474).

136 This idea is also attested in the Hippocratic *On the Heart* (*Cord.* 6 = L. 9.84.8–12), which is probably a post-Aristotelian work. Cf. the Appendix to this chapter (pp. 289–291).

137 Aristotle, *PA* 652b33–36, ed. Louis: Διὸ καὶ τὰ ρεύματα τοῖς σώμασιν ἐκ τῆς κεφαλῆς ἐστὶ τὴν ἀρχὴν, ὅσοις ἂν ᾗ τὰ περὶ τὸν ἐγκέφαλον ψυχρότερα τῆς συμμετρου κράσεως.

138 Cf. Peck 1937, 37–38.

139 Aristotle, *PA* 653a8–10, ed. Louis, trans. Lennox: Ἀλλὰ περὶ μὲν τούτων ἐν ταῖς τῶν νόσων ἀρχαῖς ἀρμόττει λέγειν, ἐφ' ὅσον τῆς φυσικῆς φιλοσοφίας ἐστὶν εἰπεῖν περὶ αὐτῶν. The reference to an account of diseases shall be discussed in more detail below (pp. 283–286).

140 Aristotle, *PA* 670a22–26, ed. Louis, trans. Lennox: Καρδία μὲν οὖν καὶ ἡπαρ πᾶσιν ἀναγκαῖα τοῖς ζῴοις, ἢ μὲν διὰ τὴν τῆς θερμότητος ἀρχὴν (δεῖ γὰρ εἶναι τινα οἶον ἐστῖαν, ἐν ᾗ κείσεται

As discussed above, the author of *On Regimen* used the verb ζωπυρέω in order to describe a kind of kindling of the soul during its embryonic development, and the picture of heated coals served him as a key illustration. In this passage Aristotle seems to exploit the same metaphor, using the participle τὸ ζωπυροῦν to represent the burning coal (or wood)¹⁴¹ in the hearth of a house (ἑστία) and thus illustrating the function of heat in the heart. In the next section I shall introduce two further passages in which we find the same motif, and finally I will suggest an interpretation of its role in Aristotle's accounts.

2.1.3 Kindled Soul in Aristotle's *Parva Naturalia*

The collection of shorter treatises traditionally called the *Parva Naturalia* follows the discussion of soul in *On the Soul* and elaborates on various issues common to body and soul, such as sensation, memory, waking and sleep, youth and old age, respiration, and life and death. All these capacities, processes and related phenomena directly or indirectly depend on the innate heat which keeps all animals alive. This topic is most explicitly discussed in three closely interconnected treatises *On Length and Shortness of Life*, *On Youth and Old Age*, and *On Respiration*.¹⁴² In all of them Aristotle takes for granted that the activities of soul depend on some kind of innate heat,¹⁴³ that this heat is responsible for digestion, and that the seat of this heat is in the heart.

We have already seen that in chap. 62 the author of *On Regimen* expresses his concept of fire as 'innate heat' (σύμφυτον θερμόν), which closely resembles the notion of 'natural, innate heat' (σύμφυτος θερμότης φυσική) in the following passage from *On youth and old age*:

τῆς φύσεως τὸ ζωπυροῦν, καὶ τοῦτο εὐφύλακτον, ὥσπερ ἀκρόπολις οὖσα τοῦ σώματος) ... Cf. Aristotle, *Cael.* 308a2 and pseudo-Aristotle, *Spir.* 484a7–8.

- 141 It might also evoke the idea of ζῶπυρον, a spark or a piece of hot coal used to kindle a fire, which is commonly used in a metaphorical sense, as for instance in Aristotle's *Cael.* 308a1–3, ed. Moraux, trans. Guthrie (modified): 'And because physical science is concerned with motion, and weight and lightness contain within themselves something like *zōpura* of motion, all investigators have availed themselves of their powers, but none save a few have defined them.' (Διὰ δὲ τὸ τὴν φυσικὴν μὲν εἶναι πραγματεῖαν περὶ κίνησιν, ταῦτα δ' ἔχειν ἐν ἑαυτοῖς ὅσον ζῶπυρ' ἅττα κινήσεως, πάντες μὲν χρώνται ταῖς δυνάμεσιν αὐτῶν, οὐ μὴν διωρίκασί γε, πλὴν ὀλίγων.) Cf. Aeschylus, *A.* 1033, and Euripides, *El.* 1121.
- 142 These texts were most probably originally written as one continuous discourse, cf. Ross 1955, 2–3.
- 143 Aristotle, *Juv.* 470a19–20, ed. Ross, trans. Hett (modified): 'Since everything that lives has a soul, and this, as we have said, cannot exist without natural heat' ('Επεὶ δὲ πᾶν ζῶν ἔχει ψυχὴν, αὕτη δ' οὐκ ἄνευ φυσικῆς ὑπάρχει θερμότητος, ὥσπερ εἴπομεν).

Now all parts and indeed the whole body of living creatures contain within them some natural, innate heat (σύμφυτον θερμότητα φυσικήν); so when alive they are perceptibly warm, but when dead and deprived of life the opposite of this. Now the source of this warmth must lie in the heart in animals with blood, and in some corresponding part in the bloodless; for while every part reduces and digests the food by means of its natural heat (τῷ φυσικῷ θερμῷ), this is most true of the part with most control. So when other parts get chilled life remains, but when the region of the heart gets cold, the whole body is destroyed, because the principle of heat in all the other parts depends on the heat therein, and the soul is so to speak kindled (τῆς ψυχῆς ὥσπερ ἐμπεπυρευμένης) in this organ, which in sanguineous animals is the heart, and in the bloodless that which corresponds to the heart. Thus life must coincide with the conservation of this heat, and what we know as death must be the destruction of this heat.¹⁴⁴

This passage combines at least three aspects of the doctrine of *On Regimen*. First, it uses almost identical terminology for the 'innate heat'; second, it adopts the idea that food is digested by means of natural fire; and third, it employs the image of 'kindled soul'. All these similarities speak in favour of Lefèvre's suggestion that Aristotle draws directly on the Hippocratic text, but none of them confirms that Aristotle's attitude towards this Hippocratic concept in *On youth and old age* is considerably different from that in the other zoological and psychological treatises, as Lefèvre supposes. The expression σύμφυτος θερμότης is used in at least two other authentic treatises by Aristotle,¹⁴⁵ and the idea that food is digested by fire or heat is a standard explanation in Aristotle's physiological accounts, as I have discussed above. As for the phrase ψυχὴ ἐμπεπυρευμένη, it most probably reflects the very same idea as the souls in *On Regimen* which

144 Aristotle, *Juv.* 469b6–20, ed. Ross, trans. Hett (modified): πάντα δὲ τὰ μόρια καὶ πᾶν τὸ σῶμα τῶν ζώων ἔχει τινὰ σύμφυτον θερμότητα φυσικήν· διὸ ζῶντα μὲν φαίνεται θερμά, τελευτῶντα δὲ καὶ στερισκόμενα τοῦ ζῆν τούναντίον· ἀναγκαῖον δὲ ταύτης τὴν ἀρχὴν τῆς θερμότητος ἐν τῇ καρδίᾳ τοῖς ἐναίμοις εἶναι, τοῖς δ' ἀναίμοις ἐν τῷ ἀνάλογον· ἐργάζεται γὰρ καὶ πέττει τῷ φυσικῷ θερμῷ τὴν τροφὴν πάντα, μάλιστα δὲ τὸ κυριώτατον· διὸ τῶν μὲν ἄλλων μορίων ψυχομένων ὑπομένει τὸ ζῆν, τοῦ δ' ἐν ταύτῃ φθείρεται πᾶμπαν, διὰ τὸ τὴν ἀρχὴν ἐντεῦθεν τῆς θερμότητος ἡρτῆσθαι πᾶσι, καὶ τῆς ψυχῆς ὥσπερ ἐμπεπυρευμένης ἐν τοῖς μορίοις τούτοις, τῶν μὲν ἀναίμων ἐν τῷ ἀνάλογον, ἐν δὲ τῇ καρδίᾳ τῶν ἐναίμων· ἀνάγκη τοίνυν ἅμα τὸ τε ζῆν ὑπάρχειν καὶ τὴν τοῦ θερμοῦ τούτου σωτηρίαν, καὶ τὸν καλούμενον θάνατον εἶναι τὴν τούτου φθοράν.

145 Aristotle, *GA* 784b7, *Somn. Vig.* 458a27. Cf. also pseudo-Aristotle, *Pr.* 860a34, 883a7, 909b16, 949b4.

ζωπυρέονται, but, terminologically speaking, the expression τὸ ζωπυροῦν in *On the Parts of Animals* (670a22–26) provides an even closer parallel.¹⁴⁶

Speaking about the image of the ‘kindled soul’, the adverbs ὥσπερ in this passage and οἶον in *PA*, 670a24 suggest a rather metaphorical sense of the idea.¹⁴⁷ But no such qualification is present in the following text:

The other faculties of the soul cannot exist without the nutritive (the reason for this has been discussed in my work *On the Soul*), nor can that exist without the natural fire in which (ἐν τούτῳ) nature has kindled it (αὐτήν).¹⁴⁸

It is not entirely clear to what αὐτήν in the last sentence refers but the most natural object is the nutritive faculty of soul. If so, connecting fire with the soul (in this case with a specific soul capacity) by the phrase ἐν τούτῳ reminds us again of *On Regimen*. As for the image of kindling, we have so far identified three closely parallel passages expressing, with minor variations, more or less the same idea: the first one mentions the heart as the place where ‘that which kindles (τὸ ζωπυροῦν) the whole organism’ resides, the second speaks about ‘the soul’ which is kindled in this organ, and the third, which actually seems to be the most precise formulation of Aristotle’s own position, refers to the nutritive capacity of soul kindled in the natural fire.¹⁴⁹

Let me now suggest a more complex interpretation of the passages where Aristotle speaks about a kindled soul. Drawing on the parallels with *On Regimen* discussed so far, it seems to be natural to read these passages in the broader context of Aristotle’s assumptions concerning embryology. Aristotle holds that the foetus has a nutritive capacity from the very beginning of its existence, but only potentially, and that it actualizes its potency at the very moment when it

146 Lefèvre mentions this passage twice in footnotes, within a list of passages illustrating the idea that heart is the seat of the vital heat, but he does not comment on it (Lefèvre 1972, 174 n. 64, 185 n. 10). Actually, if he had observed that the verb ζωπυρέω reflects the theory of *On Regimen* more closely than the other passages in *On Youth and Old Age* which use the verb ἐμπυρέω, he would have provided a counterexample to his own thesis.

147 Cf. Plato’s *Republic*, where Socrates claims that in every soul there is an instrument (i.e. reason) that is purified and ‘rekindled’ (ἀναζωπυρεῖται) by the study of mathematics (*R.* 527d–e).

148 Aristotle, *Resp.* 474b10–13, ed. Ross, trans. Hett: τὰς μὲν οὖν ἄλλας δυνάμεις τῆς ψυχῆς ἀδύνατον ὑπάρχειν ἄνευ τῆς θρεπτικῆς (δι’ ἣν δ’ αἰτίαν, εἴρηται πρότερον ἐν τοῖς Περὶ ψυχῆς), ταύτην δ’ ἄνευ τοῦ φυσικοῦ πυρός· ἐν τούτῳ γὰρ ἡ φύσις ἐμπεπύρευκεν αὐτήν.

149 Cf. Aristotle, *Resp.* 478a29–30.

begins to draw nourishment from outside its own body,¹⁵⁰ i.e. from the mother's uterus in the case of humans and other mammals, in analogy to plants drawing nourishment from the earth.¹⁵¹ Supposing that the heart is the organ of the nutritive capacity, which rests in the power of the innate heat (or fire) to draw nutrition,¹⁵² and relying on the empirical evidence gained from experiments with hen's eggs,¹⁵³ namely that a beating heart is the first functioning organ visibly recognizable in the embryos, Aristotle concludes that it is plain to the senses¹⁵⁴ as well as to reason¹⁵⁵ that the heart is the first organ distinct in actuality.¹⁵⁶ Hence what Aristotle expresses by 'kindling' is most probably the actualization of the nutritive capacity of soul at the moment when the heart starts to beat and the fire begins to draw nourishment. And supposing that birth (γένεσις) is 'the first participation in the warmth of the nutritive soul, and life is continuation of this',¹⁵⁷ the very same moment can be identified in this sense with the 'birth' of a new individual. From that moment on, 'the nature of animals requires cooling owing to the burning heat (ἐμπύρωσιν) which the soul acquires in the heart'.¹⁵⁸

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- 150 Aristotle, *GA* 736b8–12, ed. Drossaart Lulofs: Τὴν μὲν οὖν θρεπτικὴν ψυχὴν τὰ σπέρματα καὶ τὰ κῆματα τὰ μήπω χωριστὰ δῆλον ὅτι δυνάμει μὲν ἔχοντα θετέον, ἐνεργείᾳ δ' οὐκ ἔχοντα πρὶν ἢ καθάπερ τὰ χωριζόμενα τῶν κυημάτων ἔλκει τὴν τροφήν καὶ ποιεῖ τὸ τῆς τοιαύτης ψυχῆς ἔργον.
- 151 Aristotle, *GA* 740a24–27, ed. Drossaart Lulofs: Ἐπεὶ δὲ δυνάμει μὲν ἡδὴ ζῶον ἀτελές δέ, ἄλλοθεν ἀναγκαῖον λαμβάνειν τὴν τροφήν· διὸ χρήται τῇ ὑστέρᾳ καὶ τῇ ἐχούσῃ ὥσπερ γῆ φυτὸν, τοῦ λαμβάνειν τροφήν ἕως ἂν τελεωθῇ πρὸς τὸ εἶναι ἡδὴ ζῶον δυνάμει πορευτικόν.
- 152 Aristotle, *Mete.* 379a23–26, ed. Fobes: ἐξιόντος γὰρ τοῦ οἰκείου θερμοῦ συνεξατμίζεται τὸ κατὰ φύσιν ὑγρόν, καὶ τὸ σπῶν τὴν ὑγρότητα οὐκ ἔστιν· ἐπάγει γὰρ ἔλκουσα ἡ οἰκεία θερμότης.
- 153 Aristotle, *HA* 561a6–562a20, ed. Louis. Cf. *PA* 665a33–b2, ed. Louis.
- 154 Aristotle, *Juv.* 468b28–30, ed. Ross: καὶ τῶν ζώων τῶν ἐναίμων ἡ καρδιά γίνεται πρῶτον· τοῦτο δὲ δῆλον ἐξ ὧν ἐν τοῖς ἐνδεχομένοις ἔτι γινομένοις ἰδεῖν τε θεωρήκαμεν.
- 155 Aristotle, *PA* 666a16–22, ed. Louis: "Ἐτι δ' ἐπεὶ οὔτε τῶν ἀναίμων οὐθὲν αἰσθητικὸν οὔτε τὸ αἶμα, δῆλον ὡς τὸ πρῶτον ἔχον ὡς ἐν ἀγγείῳ δ' ἔχον ἀναγκαῖον εἶναι τὴν ἀρχήν. Οὐ μόνον δὲ κατὰ τὸν λόγον οὕτως ἔχειν φαίνεται, ἀλλὰ καὶ κατὰ τὴν αἴσθησιν· ἐν γὰρ τοῖς ἐμβρύοις εὐθέως ἡ καρδιά φαίνεται κινουμένη τῶν μορίων καθάπερ εἰ ζῶον, ὡς ἀρχὴ τῆς φύσεως τοῖς ἐναίμοις οὔσα.
- 156 Aristotle, *GA* 740a1–5, ed. Drossaart Lulofs: οὕτω καὶ ἐν τῷ κῆματι τρόπον τινὰ πάντων ἐνόντων τῶν μορίων δυνάμει ἡ ἀρχὴ πρὸ ὁδοῦ μάλιστα ἐνυπάρχει. διὸ ἀποκρίνεται πρῶτον ἡ καρδιά ἐνεργείᾳ. καὶ τοῦτο οὐ μόνον ἐπὶ τῆς αἰσθήσεως δῆλον (συμβαίνει γὰρ οὕτως) ἀλλὰ καὶ ἐπὶ τοῦ λόγου.
- 157 Aristotle, *Resp.* 479a29–30, ed. Ross: Γένεσις μὲν οὖν ἐστὶν ἡ πρώτη μέθεξις ἐν τῷ θερμῷ τῆς θρεπτικῆς ψυχῆς, ζωὴ δ' ἡ μονὴ ταύτης.
- 158 Aristotle, *Resp.* 478a28–30, ed. Ross: καταψύξεως μὲν οὖν ὅλως ἡ τῶν ζώων δεῖται φύσις διὰ τὴν ἐν τῇ καρδίᾳ τῆς ψυχῆς ἐμπύρωσιν. Here I prefer reading ἐμπύρωσιν, preserved in most manuscripts and adopted by Bekker and Peck, over ἐμπύρευσιν, attested in two ancient manuscripts and accepted in Ross' edition. Cf. *PA* 654a7, 649a26, and *GA* 739b10.

With respect to the concepts of the Hippocratic *On Regimen* we can note both similarities and differences. Both Aristotle and the Hippocratic author agree that the essence of vegetative life consists in the capacities to move and to nourish. Fire (or heat) plays a crucial role in digestion and growth.¹⁵⁹ It is fed by water (or moisture), and the mixture of fire and water (or the combination of heat and moisture) is the cause of growth and life.¹⁶⁰ The vital fire (or heat) is analogous to but not identical with the physical process of burning, a point implied already in the idea that the vital fire is fed by water, while a campfire or burning coals would rather be extinguished, as common sense suggests. On both accounts the concept of the vital fire serves as a kind of accepted premise explaining relevant natural phenomena, such as the efficiency of dietetic practices like the moderation of the digestive processes.¹⁶¹ Both authors also presuppose, to give another example, that at some point in the embryonic development the foetus ceases to be nourished by its own moisture and starts to draw nourishment from its mother's body, and both describe this moment in terms of a 'kindling' of the vital fire. They both relate the vital capacities of fire to soul, albeit each in a considerably different way.

Turning now to the conceptual differences, the author of *On Regimen* ascribes the capacity to nourish and to move to the mixture of fire and water, which means that both these principles contribute to the functioning (or more precisely 'usage', χρῆσις) of the organic life consisting in a balance between their essential capacities, both elements play an active role, and both mutually limit each other. He repeatedly says that soul *has* a mixture of fire and water, and occasionally speaks about the fire *of* soul. However, it is always fire

159 Cf. Aristotle, *Resp.* 474a25–b3, ed. Ross, trans. Hett (modified): 'We have said before that life and the possession of a soul depend upon some degree of heat; for digestion, by which animals assimilate their food, cannot take place apart from the soul and heat: for all this is accomplished by fire.' ('Ἐπεὶ δὲ εἴρηται πρότερον ὅτι τὸ ζῆν καὶ ἡ τῆς ψυχῆς ἕξις μετὰ θερμότητός τινός ἐστιν (οὐδὲ γὰρ ἡ πέψις, δι' ἧς ἡ τροφή γίνεται τοῖς ζώοις, οὐτ' ἄνευ ψυχῆς οὐτ' ἄνευ θερμότητός ἐστιν· πυρὶ γὰρ ἐργάζεται πάντα'). Compare the last sentence with *Vict.* 1.10 (Joly-Byl 134.17–20 = L. 6.486): τὸ θερμότατον καὶ ἰσχυρότατον πῦρ, ὅπερ πάντων κρατεῖ . . . τοῦτο πάντα διὰ παντός κυβερνᾷ . . .

160 Cf. Aristotle, *Long.* 466b21–22, ed. Ross: τῆς τε γὰρ αὐξήσεως ἡ θερμὴ ὑγρότης αἰτία καὶ τῆς ζωῆς.

161 In *On Regimen* we find numerous examples of such procedures especially in book 2. As for Aristotle, cf. *Mete.* 379b21–25, ed. Fobes (καὶ ἡ ἀρχὴ τῆς τελειώσεως ὑπὸ θερμότητος τῆς οἰκείας συμβαίνει, καὶ διὰ τίνος τῶν ἐκτὸς βοηθείας συνεπιτελεσθῇ, ὅλον ἡ τροφή συμπέττεται καὶ διὰ λουτρῶν καὶ δι' ἄλλων τοιούτων), or *Ph.* 194b32–35, ed. Ross (τοῦτο δ' ἐστὶν τὸ οὐ ἔνεκα, ὅλον τοῦ περιπατεῖν ἡ ὑγίεια· διὰ τί γὰρ περιπατεῖ; φαμέν, ἵνα ὑγιαίνῃ, καὶ εἰπόντες οὕτως οἰόμεθα ἀποδεωκέναί τὸ αἴτιον).

and water which remain the main explanatory principles applied to the processes in the soul as well as in the body, related to the variables of everyday life, and accordingly modifiable by dietetic means. Even in passages where the term *psuchē* evidently refers to seeds or embryos, it is always the activity of fire (counterbalanced by water) that is supposed to be responsible for their development.

Aristotle also speaks about the fire of soul but he makes clear (at least in some passages) that it is a 'function' (ἔργον) of the soul to nourish and to move, while fire is rather a 'contributory cause', a necessary condition, something without which soul cannot come about. Soul provides the unlimited fire with a kind of limit and proportion (πέρας καὶ λόγος) in size and growth; it uses fire as its instrument in reproduction, development, digestion, and the maintenance of the organism as a whole.¹⁶² As for the variations in Aristotle's passages, it seems that the more emphasis is put upon the soul as the forming and goal-directed principle, the less independent role is ascribed to fire, and the less difference can be seen between the innate fire in living organisms and the physical process of burning. Hence, what has been expressed by the Hippocratic author in terms of balance between equal opposites (fire and water), Aristotle explains in terms of hierarchy and dominance: it is the soul which governs and limits the activity of fire, while the fire takes its nourishment from the completely passive element of water.

There is also a great difference in approach to causal explanations in these two accounts. It is probably not necessary to underline that there is nothing comparable to the Aristotelian causal system in *On Regimen* and that such refined distinctions as we have seen in the passage from *On the Soul*, i.e. between the main cause (ἀπλῶς αἴτιον) and the contributory cause (τὸ συναίτιον), or between the form (λόγος) and matter (ὕλη), are absent in the Hippocratic text.¹⁶³ Hence, when the Hippocratic author proclaims that fire is one of the two principles of which human nature consists or that fire 'moves' all things, it does not mean that he reduces fire to the material or efficient cause. There is actually a great deal of teleological thinking in the Hippocratic account, especially when it comes to explanations of embryonic development, but the absence of more precise causal distinctions makes it difficult (for us as well as for any post-Aristotelian reader) to understand what, precisely, is the role of fire, soul or seed in these processes.

162 Interestingly enough, a similar role is ascribed to *pneuma* in Aristotle's *GA* 789b7–9.

163 A similar causal distinction is attested in the Hippocratic *On Breaths*, where it is said that the cause (αἴτιον) of all diseases is to be found in the airs (αἱ φῦσαι), while other conditions are only συναίτια καὶ μεταίτια (*Flat.* 15, Jouanna 124.11–14 = L. 6.114.13–15).

Another substantial divergence, the importance of which can hardly be overstated, is found in the precision given to the anatomical descriptions. The author of *On Regimen* is extremely vague when it comes to describing the inner structures of the human body and, in fact, he rarely mentions any organs. He focusses on processes rather than structures and, concerning the digestive system, he speaks generally about cavities (κοιλίη/κοιλίαι) but hardly gives any clue where exactly in the body this and other vital processes take place, what organs contribute to them, and how.¹⁶⁴ Aristotle, on the other hand, takes pains to explain and argue in various ways that the seat of the nutritive faculty and of the vital fire is to be located in the heart;¹⁶⁵ this assumption serves him as a starting point for a complex account of virtually all other inner organs and their functions.

2.2 Aristotle's Concepts of Health and Natural Teleology

The famous Hippocratic concept of self-healing nature (*natura medicatrix*), which 'was to have a glorious future in Western medicine',¹⁶⁶ has been recognized as an important precursor of Aristotle's concept of natural teleology. As far as I know, this topic was first addressed by L. Bourgey, who concluded that the Hippocratic and Aristotelian concepts of nature share certain undeniable common features, namely that *phusis* presents a regular and ordered activity which organizes the development and maintains the existence of living

164 In *Vict.* 1.9 (Joly-Byl 132.26–28 = L. 6.484) we read about 'the innermost' (ἐσωτάτω) place where 'the moisture is most abundant' (πλεῖστον γὰρ τὸ ὑγρὸν ἐνταῦθα ἐνῆν). This place is explicitly called κοιλίη (ὑπερ κοιλίη καλεῖται), but in other passages (cf. *Vict.* 2.46, Joly-Byl 168.11 = L. 6.544; 2.60, 184.2 = 6.574; 4.79, 210.26 = 6.624; 4.79, 210.28 = 6.624; 4.80, 212.11 = 6.626) the author speaks about 'cavities' in plural (κοιλίαι). It is actually not clear whether he means here the stomach, bladder, or belly in general. But since elsewhere he occasionally speaks explicitly about the stomach (γαστήρ: *Vict.* 1.12, Joly-Byl 136.12 = L. 6.488; 2.62, 184.19 = 6.576) and bladder (κύστις: *Vict.* 2.47, Joly-Byl 168.29 = L. 6.546; 4.90, 226.17 = 6.656), the third option seems to be most probable. In the next chapter (*Vict.* 1.10, Joly-Byl 134.7 = L. 6.484) the author mentions 'the greatest cavity' which is the 'reservoir of dry and moist water' (κοιλίην μὲν τὴν μεγίστην, ὅδατι ξηρῷ καὶ ὑγρῷ ταμείον), but again without any anatomical specification.

165 As for the idea that the heart is the seat of vital heat, some parallels are to be found in the Hippocratic *On Fleshes*. The prominent role of heat in this Hippocratic account is considerable, but concerning the other more detailed features I have identified as common to Aristotle and *On Regimen*, the author of *On Fleshes* never specifies this fire or heat as 'innate' and does not connect it directly to the soul. Furthermore, he assumes that heat is nourished by the coldness (*Carn.* 6 = L. 8.592.11: τροφή ἐστι τῷ θερμῷ τὸ ψυχρόν), not by the moistness, as is taken for granted in *On Regimen* and Aristotle.

166 Jouanna 1999, 346.

organisms, and that, in healing itself, an organism only continues the same activity by virtue of which it organizes itself.¹⁶⁷ A few years later J. Jouanna suggested that certain Hippocratic passages discussing the concept of self-healing nature express a teleological conception of nature, even though ‘it was only with Aristotle that this conception came to be clearly stated’.¹⁶⁸ These and similar conclusions presuppose that Aristotle did adopt the Hippocratic *natura medicatrix* principle or something equivalent to it.¹⁶⁹ In what follows I will put this interpretation to the test. In the first section I discuss Hippocratic concepts of human nature, health and the self-healing capacity as possible precursors of Aristotle’s notion of natural teleology. Then I turn to Aristotle and his own account of the topic and to his discussion of the analogy between nature and medicine. In the third section, I argue that concerning the natural self-healing of diseases, Aristotle’s account is much more nuanced, allowing also for the role of chance and non-teleological spontaneity, which considerably limits the applicability of the idea of a *natura medicatrix* in natural philosophy but, at the same time, significantly reinforces the role of medicine as a paradigm of practical philosophy.

2.2.1 The Concept of Self-Healing Nature

As illustrated in the first chapter of this study, Hippocratic authors frequently speak not only about the nature (*phusis*) of different individuals, diseases, specific environments, seasons, particular foods and drinks, etc., but also generally about the nature of man (which they called alternatively φύσις ἀνθρώπου, ἀνθρώπινη, ἀνθρωποειδής or, as the case may be, ἡμέων ἢ φύσις).¹⁷⁰ Some of them explicitly pointed out that a success in healing presupposes a certain understanding of human nature, as for example the author of *On Regimen*, who claims in the methodological introduction to his dietetic theory that ‘he who aspires to treat correctly of human regimen must first acquire knowledge and discernment of the nature of man in general (παντὸς φύσιν ἀνθρώπου).’¹⁷¹ A similarly general claim is to be found in *Places in man*, where we read that the

167 Bourgey 1980, 64.

168 Jouanna 1999, 346.

169 Cf. Sedley 2007, 175 who ascribes to Aristotle the following line of argument: ‘... Since medicine is a craft that aims to help the body regain its health, that goal of regaining health can be seen to have already been governing the internal natural healing processes, which the doctor intervenes merely to facilitate and complete.’

170 E.g. *VM* 3 (Jouanna 122.14 = L. 1.578), *Art.* 13 (L. 4.116), *Ulc.* 8 (L. 6.406), *Vict.* 1.2 (Joly-Byl 122.23 = L. 6.468), *Int.* 6 (L. 7.180), *Nat. Hom.* 1 (Jouanna 164.2–4 = L. 6.32), *Flat.* 6 (Jouanna 110.7 = L. 6.98), *Acut.* 38 (Joly 52.5–6 = L. 2.304). See also *Morb.* 4.32 (L. 7.542).

171 *Vict.* 1.2 (Joly-Byl 122.22–23 = L. 6.468), trans. Jones.

nature of the human body 'is the beginning point of medical reasoning (ἀρχὴ τοῦ ἐν ἡγερικῇ λόγου).'¹⁷²

For judging the proper treatment of the sick, a physician naturally needs a certain notion of the goal of his treatment, i.e. a concept of health as an optimal state of the human condition. As discussed in detail in the first chapter, the optimal and healthy state was commonly defined in the Greek medical tradition in terms of a balance within a mixture of certain bodily constituents and their qualities. Since the balanced state was often understood as the most natural state, we can see that the concept of health often overlaps with the concept of the nature of man in the medical accounts.¹⁷³ Studying the nature of man was, therefore, for many Hippocratic authors the necessary condition for a successful medical therapy.

Another reason which accounts for the interest of the medical authors in the study of nature, and particularly human nature, concerns the famous concept of self-healing nature. The most explicit and most discussed passage documenting the idea that nature has an autonomous, non-intellectual but goal-directed healing potency appears in the sixth book of *Epidemics*:

The body's nature is the physician in disease. Nature finds the way for herself (ἐωυτῇ), not from thought (οὐκ ἐκ διανοίας). For example, blinking,¹⁷⁴ and the tongue offers its assistance, and all similar things. Well trained, readily and without instruction, nature does what is needed.¹⁷⁵

We should notice that nature is said to heal itself (αὐτὴ ἐωυτῇ), spontaneously and independently of any external stimuli, and of medical treatment in particular. The author of *On joints* speaks similarly about the capacity of body to find for itself (αὐτὸ ἐωυτῷ) the easiest attitude available in the case of an unreduced

¹⁷² *Loc. Hom.* 2.1 (Craik 38.4 = L. 6.278). See also the opening chapters in *On the Nature of Man* or the criticism in the Hippocratic *On Ancient Medicine* of 'some doctors and sophists' who say that 'it is impossible for anyone to know medicine who does not know what the human being is (ὅ τι ἐστὶν ἄνθρωπος); anyone who is going to treat patients correctly must . . . learn this' (*VM* 20, Jouanna 145.18–146.3 = L. 1.620), trans. Schiefelky. The necessity of taking into consideration the patient's regimen 'while he is yet in health' is also mentioned in *Acut.* 28 (Joly 47.22–23 = L. 2.280), trans. Jones.

¹⁷³ Cf. the discussion of the relevant passages from *On Regimen in Acute Diseases*, *On Ancient Medicine* and other treatises in Jouanna 1999, 344–346.

¹⁷⁴ Cf. Aristotle's *PA* 657a36–b1, ed. Louis, trans. Lennox (modified): 'They all [i.e. human beings, birds and four-footed animals] blink in order to prevent things striking the eyes, and this is not done by choice (ἐκ προαίρεσεως), but rather nature (φύσις) does it . . .'

¹⁷⁵ *Epid.* 6.5.1 (Manetti-Roselli 100.7–102.2 = L. 5.314), trans. Smith.

inward dislocation of the thigh.¹⁷⁶ The author of *On Nutriment* says laconically that ‘Nature suffices in everything for all.’¹⁷⁷ More explicit is the author of *On Regimen*, who gives a quite specific picture of the healing activities ascribed to nature:

This too is part of the physician’s art: to do away with that which causes pain, and by taking away the cause of his suffering to make him sound. Nature of herself (αὐτομάτη) knows (ἐπίσταται) how to do these things.¹⁷⁸

As to the term αὐτομάτη, in other Hippocratic treatises it often specifies things that are accomplished by *phusis* (or ‘body’) without therapeutic intervention (or as a result of unpredictable reactions to that intervention).¹⁷⁹ It does not necessarily exclude the possibility that such things occur by chance, as we shall see later, but this possibility is not available in our passage, where the term has the same function as the expressions αὐτὴ ἐωυτῇ and αὐτὸ ἐωυτῷ in the aforementioned passages. In all these passages *phusis* is taken as an agent separate from the medical art and having a certain inner capacity for achieving health. Despite being analogous, this capacity is not identical with the expertise of physicians, for in contrast to the physicians, who are trained in medicine for many years by their teachers (typically their own fathers), *phusis* can heal without being educated or instructed. ‘In everyone nature (φύσις πάντων) acts without being taught (ἀδίδακτοι),’ as we can translate the aphorism in *On Nutriment*.¹⁸⁰ Supposing that all artistic processes are either closely similar or identical (ὁμοίησιν) with those that occur in the human body,¹⁸¹ and that nature spontaneously or intuitively knows how to do the same things the physicians aim to do (e.g. to do away with that which causes pain and, by taking away the cause of man’s suffering, to restore him to a sound state), physicians can learn a lot directly from nature.

176 *Art.* 52 (L. 4.228–230).

177 *Alim.* 15 (Joly 141.24 = L. 9.102).

178 *Vict.* 1.15 (Joly-Byl 136.27–138.1 = L. 6.490), trans. Jones.

179 Cf. *Nat. Hom.* 12 (Jouanna 200.8–10 = L. 6.64); *VM* 19 (Jouanna 144.13–16 = L. 1.618); *Morb.* 1.7 (L. 6.154), 1.8 (L. 6.154), 1.17 (L. 6.170), 1.19 (L. 6.174); *Morb.* 2.28 (L. 7.46), 2.30 (L. 7.48), 2.31 (L. 7.48), 2.71 (L. 7.108); *Morb.* 3.16 (L. 7.152); *Hum.* 5 (L. 5.482); *Alim.* 14 (Joly 141.20–23 = L. 9.102); *Int.* 21 (L. 7.218).

180 *Alim.* 39 (Joly 145.12 = L. 9.112). Outside the Hippocratic corpus a similar idea is expressed by, for example, Epicharmus (DK 23 B 4) who claims that *phusis* learns from herself.

181 Cf. *Vict.* 1.11 (Joly-Byl 134.22 = L. 6. 486). Schiefsky 2007, 71 remarks that ‘it is because of this that an understanding of *technē* is used here to gain knowledge of human *phusis*’.

Even though we do not find in any of the aforementioned passages the same teleological terminology we are used to reading in Aristotle's accounts, a specific kind of goal-directedness in the natural processes is implicitly present in the *natura medicatrix* concept, which can be reconstructed in the following way: *phusis* is understood as the potency to sustain the human body in the optimal, healthy state and also, at least to a certain extent, to restore this state when the natural balance is lost. In this sense *phusis* acts teleologically, i.e. with regard to a goal of its own, which is the healthy and fully functional organism. As a rule, *phusis* seems to be capable of healing common injuries and diseases and spontaneously directs man's regimen so that he or she can cope with the unfavourable changes in his or her environment without needing medical assistance.¹⁸² Accordingly, the role of the art of medicine consists mainly in facilitating and accelerating this natural healing process.

2.2.2 Aristotle on the Analogy between Nature and Medicine

Similarly to the authors of *On Regimen* and other Hippocratic texts, Aristotle often draws analogies between art and nature as a 'model of understanding' or a 'heuristic device for learning' about nature,¹⁸³ and repeatedly claims that 'art imitates nature'.¹⁸⁴ The most explicit explanation of what this imitation consists in is to be found in the following passage from the second book of *Physics*:

Again, where there is an end (τέλος), the successive things which go before are done for it (τούτου ἕνεκα). As things are done, so they are by nature such as to be, and as they are by nature such as to be, so they are done, if there is no impediment. Things are done for something (ἕνεκά του). Therefore they are by nature such as to be for something (ἕνεκά του).¹⁸⁵

The activities of arts and nature are interpreted as teleological, which means that every process is subordinated to the intended goal or goals. A good example

182 Cf. *VM* 16 (Jouanna 141.8–11 = L. 1.612), 19 (Jouanna 143.7–145.16 = L. 1.616–620), and 21 (Jouanna 148.4–7 = L. 1.624); *Hum.* 2 (L. 5.478); *Morb.* 1.5 (L. 6.148) and 1.20 (L. 6.176–178).

183 Cf. Schiefky 2007, 68 and 74.

184 Aristotle, *Ph.* 194a21–22, *Mete.* 381b6 (discussed below), *Protrep.* fr. 13.2–3 and fr. 14.1 (ed. Düring). In the second chapter (pp. 129–164) I have expressed a series of objections against the common practice of translating the verb μιμεῖσθαι as 'imitate' in *On Regimen* and other Hippocratic writings. In this chapter, mainly for the sake of convenience, I take the liberty to follow, at least in some cases, the standard translation without marking the difference between resemblance and imitation in each particular passage, as that is not my topic here.

185 Aristotle, *Ph.* 199a8–12, ed. Ross, trans. Charlton.

to compare the two accounts is the analogy of cooking and digestion, which is to be found in chap. 20 of *On Regimen* (together with gold-working) and in Aristotle's *Meteorology*. As discussed in detail in the second chapter, the Hippocratic author holds that the arts of cooking and gold-working are analogical to the natural process of digestion, namely in using 'gentle, not strong' fire to transform certain materials for other purposes (on both sides of the analogy this process is expressed by the term *συνίσταται*).¹⁸⁶ Even though he does not explicitly speak about the goals, ends or purposes of the discussed activities, the products of gold-working as well as the products of the gentle fire in the body can hardly be considered to be accidental.

Aristotle in his *Meteorology* also speaks about the process of 'compaction' or 'organization' (*συνιστάναι*) of materials in the animal body in terms of the effect of heat,¹⁸⁷ and compares the concoction of food with roasting and boiling:

Now broiling and boiling are artificial processes, but the same general kind of thing, as we said, is found in nature too. The affections produced are similar though they lack a name; for art imitates nature (*μιμνῆται γὰρ ἡ τέχνη τὴν φύσιν*). For instance, the concoction of food in the body is like boiling, for it takes place in a hot and moist medium and the agent is the heat of the body. So, too certain forms of indigestion are like parboiling.¹⁸⁸

We can see that Aristotle as well as the author of *On Regimen* interprets various culinary technologies in analogy with the natural capacity of animal bodies to use heat in order to transform the digested materials into an integral part of a living animal (or specifically human) body. In both accounts we can implicitly read a concept of natural teleology, which Aristotle adopts as a general methodological premiss of natural philosophy.

Supposing that every branch of science has its own premises from which conclusions proper to that science are drawn,¹⁸⁹ Aristotle takes as a starting point in his investigations into nature that *phusis* always acts teleologically, i.e. she always acts for the sake of some goal.¹⁹⁰ The most explicit formulation of this idea is to be found in the second chapter of the *Progression of Animals*:

186 *Vict* 1.20 (Joly-Byl 140.1–4 = L. 6.494), discussed above (pp. 156–157).

187 Cf. *Mete.* 379b6–8, ed. Fobes, trans. Webster: 'Animals too are generated in putrefying bodies, because the heat that has been expelled, being natural, organizes (*συνιστάναι*) the particles thrown out with it.'

188 Aristotle, *Mete.* 381b3–7, ed. Fobes, trans. Webster (modified).

189 Aristotle, *A Po.* 77a36–8, 76a16–17.

190 Aristotle, *GA* 715b15–16, *DA* 434a31–32.

The starting point (ἀρχή) of our investigation is achieved by supposing [principles] which we are accustomed to use often in natural inquiry—assuming this is the way things stand in all the works of nature. One of these [principles] is that nature does nothing in vain, but always, given the possibilities, does what is best for the substantial being (οὐσία) of each kind (γένος) of animal; accordingly, if it is better in a certain way, that it is also how it is by nature.¹⁹¹

Here we find a fusion of two different articulations of the same teleological idea, which are not always used in Aristotle's biological works together.¹⁹² The first one is formulated as a negative assertion: 'nature does nothing in vain', and the other as a positive assertion: 'nature does what is best for the substantial being of each kind of animal.'¹⁹³ In the last sentence of our passage we read that 'nature always does what is best' and that the results of nature are 'better in a certain way'. Supposing that for man it is better to be healthy than to be ill, and supposing that health is treated as a natural goal by Aristotle, we might expect that the capacity of self-healing will be understood as an integral part of human nature and that recovery from each and every disease without medical assistance should be interpreted as a teleological process achieved by means of this natural capacity. This hypothesis will be tested in the next section, while in the present discussion I shall focus mainly on the analogy between the teleology in nature and medicine.

When discussing natural teleology in the first book of *On the Parts of Animals* and the second book of *Physics* which are both, each in its particular way, intended as introductory texts, Aristotle often illustrates natural processes by drawing analogies with arts, and medicine is one of his most common examples. In many of these passages the art of medicine stands as a paradigm for the goal-directedness of nature, as we can read for example in the account of *phusis* in the first book of *On the Parts of Animals*:

191 Aristotle, *IA* 704b12–18, ed. Jaeger, trans. Lennox.

192 Frequently we read in Aristotle that 'nature does nothing in vain' (*DA* 432b21 and 434a31, *GA* 741b4–5, *IA* 704b15 and 711a18, *PA* 658a8–9, *Pol.* 1253a9), sometimes 'nature does nothing in vain and superfluous' or only 'superfluous' (*GA* 739b19–20, *PA* 691b4 and 694a14–15), or simply 'nature does what is best' (*PA* 687a16–17, *Pr.* 915a34–35, cf. *PA* 658a23–24).

193 As Lennox 1997, 200 n. 5 infers, the negative form is used in Aristotle's biological explanations on its own 'to explain the *absence* of features for one reason or another thought to need explanation', while the positive form is 'typically, though not invariably, used when a part is shown to be present because it is better that the animal have it'.

...the account (λόγος) is an origin (ἀρχή) alike in things composed according to art and in things composed by nature. For once the doctor has defined health, and the builder has defined house, either by thought (τῇ διανοίᾳ) or perception, they provide the accounts (τοὺς λόγους) and the causes (τὰς αἰτίας) of each of the things they produce, and the reason why it must be produced in this way. Yet that for the sake of which (τὸ οὐδ' ἕνεκα) and the good (τὸ καλόν) are present more in the works of nature than in those of art.¹⁹⁴

The aim of this and similar passages is to illustrate the goal-directedness of the works of nature. In the same vein as the author of *On Regimen*, who presupposed that his readers will better understand the essence of certain arts and crafts than natural processes, Aristotle illustrates the teleology in nature by drawing an analogy between building and medical healing. Both builder and physician have certain concepts of the goal they want to reach, i.e. an idea of a house and an idea of health. This goal is said to be the origin of their activities and the same should apply to natural processes, where, as he says, teleology is even more present than in arts. Aristotle says nothing specific about the goals of nature in this passage, but it should evidently be something analogical with or identical to the medical concept of health. An even closer analogy between medical and natural activities is drawn in the second book of the *Physics*:

So if the “for the sake of something” (τὸ ἕνεκά του) is present in art, it is present in nature too. The point is clearest when someone doctors himself: nature is like that (τούτῳ γὰρ ἔοικεν). That nature is a cause (αἰτία), then, and a cause in this way, for something, is plain.¹⁹⁵

One might be tempted to conclude that according to this passage every instance of un-doctored healing rests on the self-healing capacity, present in nature, and that this is exactly how nature operates on these occasions. After all, the passage submits that nature operates as the art of medicine. But we should notice that the healing capacity is used here only as an illustration of the goal-directedness of *phusis* and quite different operations of nature are, thus, subsumed under this claim. The difference between medical and natural teleology is more evident in the following passage, where Aristotle considers the eventuality that a physician is healing himself:

194 Aristotle, *PA* 639b15–21, ed. Louis, trans. Lennox. Cf. *Ph.* 199a8–20.

195 Aristotle, *Ph.* 199b29–34, ed. Ross, trans. Charlton (modified). Cf. *Ph.* 257b5–6.

This suggests that nature is a sort of source (ἀρχή) and cause (αἰτία) of change and remaining unchanged in that to which it belongs primarily of itself, that is, not by virtue of concurrence (κατὰ συμβεβηκός). What do I mean by that qualification? Well, a man who is a doctor might come to be a cause of health in himself. Still, in so far as he is healed he does not possess the art of medicine, but being a doctor and being healed merely concur (συμβέβηκεν) in the same person. Were the matter otherwise, the roles would not be separable. Similarly with other things which are made. They none of them have in themselves the source of their making, but in some cases, such as that of a house or anything else made by human hands, the source is in something else and external, whilst in others the source is in the thing, but not in the thing of itself, i.e. when the thing comes to be a cause to itself by virtue of concurrence (κατὰ συμβεβηκός αἴτια).¹⁹⁶

The healing process discussed in this example is not one of a self-healing *phusis*, since the healing capacity following from a certain concept of health is not present in the nature of this man as a patient; in this manner it is only accidental (κατὰ συμβεβηκός) that the physician and the patient are one and the same in person. Evidently, not everyone who gets sick is capable of curing himself by the means of medicine, this capacity is not naturally present in the form of man: humans beget humans,¹⁹⁷ but physicians do not always and automatically beget physicians.¹⁹⁸ As we have already read in the *Metaphysics*, physicians acquire their skills through experience and learning about the concept (λόγος) of medicine, not directly from nature.¹⁹⁹

In summary, I have tried to indicate certain affinities between Aristotle and his medical forerunners concerning the capacity of arts to imitate nature, and concerning medicine as an analogy for natural teleology. In the last passage discussed we have seen Aristotle distinguishing between healing via medicine and the operations of nature, and even though we have not yet met any direct evidence for Aristotle's adoption of the *natura medicatrix* principle, nothing so far prevents us from presupposing that he believed in the self-healing potencies of human nature in the same manner as did his Hippocratic predecessors. In the next section I will qualify this supposition, and show that Aristotle substantially limits the self-healing potency of human nature. Consequently,

196 Aristotle, *Ph.* 192b20–32, ed. Ross, trans. Charlton.

197 Aristotle, *Ph.* 193b12.

198 Cf. Aristotle, *Ph.* 193b13–18.

199 Cf. Aristotle, *Metaph.* 980b27–981a12.

I shall suggest that Aristotle's views on the natural self-healing phenomena are probably motivated by his concern with the status of medicine, which serves him as a paradigm in ethics. For this line of argument it is necessary to remark that according to Aristotle medicine (and arts in general) not only imitates nature, but also 'completes that which nature is unable to bring to completion'.²⁰⁰ Indeed, the fact that medicine imitates nature does not detract from its significance as a paradigmatic art aiming at 'filling up nature's deficiencies'.²⁰¹ But conversely, the accent on the indispensability of medicine for living a healthy and good life can impose limitations on the significance of the *natura medicatrix* principle in Aristotle's view.

2.2.3 The Limitations of Aristotle's Natural Teleology

The working hypothesis formulated above presupposes that if (a) it is better for a man to be healthy rather than to be ill, (b) health is a natural goal, and (c) there is some evidence of self-healing in nature, we should expect Aristotle to interpret such processes as goal-directed activities of *phusis* aiming at restoration of health. In other words, supposing that there is obvious empirical evidence that at least some of the common diseases (let's say common cold or influenza) are cured 'always or for the most part' without need of medical assistance,²⁰² it is reasonable to conclude that the healing process occurs naturally (φύσει) and that it is a result of a goal-directed activity of human nature.²⁰³ In the following paragraphs I shall try to show that in spite of all these expectations proceeding from the general premises of Aristotle's natural philosophy and from common experience attested in the medical literature, his own position concerning the status of self-healing in nature can be considerably different.

On several occasions Aristotle provides examples of healing accomplished by nature and one of these occurs in his discussion of the function of neck and its inner parts in the third book of *On the Parts of Animals*. The fact that not all animals have a neck is explained by the existence of its inner parts 'for the sake of which the neck is naturally present'. These inner parts are the larynx and oesophagus, the first one is present for the sake of breath, the second one for the sake of transporting nourishment from the mouth to the gut. But

200 Aristotle, *Ph.* 199a15–17, ed. Ross, trans. Charlton.

201 Aristotle, *Pol.* 1336b37–1337a3, ed. Ross, trans. Rackham. For a detailed analysis of this topic see R. Smith 1992.

202 E.g. fevers regularly disappearing without external help are mentioned in the Hippocratic *On Ancient Medicine* (VM 16, Jouanna 140.16–141.11 = L. 1.610–612).

203 Cf. Aristotle, *Ph.* 198b32–36, 199b24–25.

since the larynx together with the windpipe has also another function, which is vocalization, the position of the windpipe interferes with the food. Nature compensates for this disadvantage by supplying these animals with an epiglottis, as we read in the following passage:

Let it be assumed, then, that we have stated the following things: the cause owing to which some animals have an epiglottis and others do not, and why nature has remedied (ἰάτρευκεν) the inefficiency of the position of the windpipe by constructing the part called the epiglottis.²⁰⁴

Here the medical term for healing (ἰάτρευκεν) is not used as a mere analogy but as a peculiar, goal-directed activity of *phusis*. We should notice that *phusis* is described in this passage as healing some necessary disadvantages of the generic form within the natural development of such organisms. A similar meaning can be found in Aristotle's description of the healing potency of *phusis* in regard to certain injuries, as in the following examples:

If you prick out the eyes of swallows while they are still young, the birds will become healthy (γίνονται ὑγιεῖς) and later on be able to see.²⁰⁵

Some say that serpents have the same faculty as swallow-chicks: that if anyone pricks their eyes out they grow again (φύεσθαι πάλιν). The tails, too, of lizards and serpents grow again (φύονται) if they are cut off.²⁰⁶

Both these examples discuss an injury which can be naturally healed. The condition that a recovery may happen only when the swallows are young is explained in *On the Generation of Animals*, where Aristotle describes the generation of the offspring of birds which are born before their formation is perfected:

And on this account, if the eyes of a swallow are deliberately put out while the bird is still young, they recover (πάλιν ὑγιαίνουν), because the injury is inflicted during the process of their formation and not after its completion; that is why they grow (φύονται) and spring up afresh (βλαστάνουσιν ἐξ ἀρχῆς).²⁰⁷

204 Aristotle, *PA* 665a6–9, ed. Louis, trans. Lennox.

205 Aristotle, *HA* 563a14–16, ed. Louis, trans. Peck (modified).

206 Aristotle, *HA* 508b4–8, ed. Louis, trans. Peck.

207 Aristotle, *GA* 774b31–34, ed. Drossaart Lulofs, trans. Peck.

Now it is clear that in the case of young swallows deprived of eyes the healing process occurs as a part of the natural completion of their generic form. In the case of lizards and serpents the condition that they must be young and still in the process of development is not mentioned, but even there nature replaces something which is a part of the generic form of these animals. Contrary to the tail of the reptiles, man's hand unfortunately does not grow again when being cut off, and in this sense the recovery of a tail is quite an exceptional phenomenon in the animal kingdom. On the other hand, Aristotle would probably not deny that minor damage to a man's skin, for instance, is usually healed by nature without any need of medical treatment.²⁰⁸ Although *phusis* always 'does what is best for the substantial being of each kind of animal', she is limited by the given possibilities, which are evidently different in the case of the recovery of scratched skin or a hand that has been cut off.

We have seen so far that Aristotle adopts the *natura medicatrix* principle in the case of certain disadvantages in the natural design of animal forms and to a certain extent even in the case of injuries, which can be naturally healed by virtue of the capacity of *phusis* to generate and regenerate individual bodies according to certain generic forms. In this sense, the suggestion of L. Bourgey mentioned in the introduction that an organism healing itself only continues in the same activity by virtue of which it creates itself is correct both for the Hippocratic authors and for Aristotle. But is it also true in the case of health and healing disease? Does Aristotle assume health to be an integral part of human *phusis* and does he interpret every instance of spontaneous healing teleologically?

Before we proceed to a discussion of passages indicating Aristotle's answer to these questions, we shall briefly focus on his concept of health. Aristotle usually speaks about health in terms of some state (ἔξις) or mixture (κρᾶσις) of bodily constituents, which are identified with humours (bile, phlegm or most often blood),²⁰⁹ or generally with 'warm and cool things',²¹⁰ as we can see, for example, in the following account:

Some states (ἔξεις) are excellences (ἀρεταί), others are defects (κακίαι) ... Again, we say that all the excellences (ἀρεταί) are conditions determined by some particular relation. Thus bodily excellences such as health and fitness (οἷον ὑγίειαν καὶ εὐεξίαν) we ascribe to the mixture and

208 Cf. Aristotle, *A Po.* 79a15–17.

209 Aristotle, *Ph.* 194a23–24 and 201a34–b3, ed. Ross. Cf. *HA* 520b29–31.

210 Aristotle, *Ph.* 210a20–21 and 210b25–27, *Cat.* 8b37–9a1, *GC* 324a15–19 and 324b1–3, *Top.* 139b21 and 145b8.

due proportion (ἐν κράσει καὶ συμμετρίᾳ) of the warm and cold things,²¹¹ in relation either to each other or to what surrounds them.²¹²

According to this account, health is the only such state of body, which is balanced, and in this sense it can be called 'excellence'. Concerning our initial hypothesis and judging from the terms ἀρετή (as an opposite to κακία) and εὐεξία, we may deduce that Aristotle considers health a fundamental good for man. It seems therefore that the first condition of my hypothesis that the process of self-healing is a natural teleological activity is satisfied: health is considered as something good for man. The second condition, that health is a sort of natural goal, will be justified in the following paragraphs.

When discussing the functions of the bodily organs *phusis* designs for the sake of the good of each animal, Aristotle sometimes mentions their contribution to health. For example liver, which is considered to exist for the sake of the concoction of food and to be necessary for all animals (or more precisely all blooded animals),²¹³ also contributes to the proper mixture (εὐκράσια) and health of the body.²¹⁴ But liver also produces bile as its residue, which is often the cause of pathological disturbances within the bodily state (ἑξίς),²¹⁵ and having no purpose, it is said to be a by-product existing only of necessity.²¹⁶ Other residues, for example the 'soft' and 'hard' fats, influence the health conditions as well. When they are present among the parts of animals in moderate amounts, they are protective and contribute to health, but when they are excessive in quantity, 'they are destructive and injurious'.²¹⁷

None of the organs or residues discussed so far has health as its primary natural goal and their eventual contribution to a healthy state cannot be rendered as their exclusive natural goal. As far as I am aware, the only example mentioned by Aristotle is one of the two essential functions of the organ of smell. Within the discussion of smell in *On Sense and Sensible Objects*, Aristotle distinguishes two kinds of the sense. One kind, common to all animals, corresponds to flavours and its pleasantness and unpleasantness is incidental, because it is pleasant when we are hungry but unpleasant when we are sated.²¹⁸

211 As for the resemblance of this terminology to that of *On Regimen*, see p. 229 n. 313 above.

212 Aristotle, *Ph.* 246a10–b6, ed. Ross, trans. Wicksteed and Cornford (modified).

213 Aristotle, *PA* 670a20–29 and 677a36–b2.

214 Aristotle, *PA* 673b24–26.

215 Cf. Aristotle, *PA* 676b16–677b10.

216 Aristotle, *PA* 677a11–18.

217 Aristotle, *PA* 651a36–b2, trans. Lennox.

218 Aristotle, *Sens.* 443b17–26.

The other kind is peculiar to humans and perceives odours which are always pleasant, as for example the odours of flowers. Its function is explained in the following way:

This kind of smell, then, has been evolved for man to preserve his health (πρὸς βοήθειαν ὑγείας γέγονε); this is its only function (ἔργον). And it obviously performs it; for sweet food, whether dry or moist, is often unhealthy, whereas that which has a smell which is in itself pleasant is nearly always beneficial to persons in any state of health.²¹⁹

This organ, at least, exists for the sake of the preservation of health, which implies that health is considered to be a sort of natural goal and must be included in the human form. But in spite of the facts that health is something good for man and that nature equips man with an organ which has the preservation of health as one of its specific functions, it does not necessarily follow that the same organ also participates in the restoration of health when it has been lost. Preservation and restoration of health are evidently two different things for Aristotle and concerning the phenomenon of self-healing diseases, he seems to be reluctant to explain it in a teleological way, as we shall see presently.

In the *Metaphysics* (book 7, chap. 7) Aristotle claims that ‘of things which are generated, some are generated naturally (φύσει), others artificially (τέχνῃ), and others spontaneously (ἀπὸ αὐτομάτου).’²²⁰ And since health and disease are frequently said to be generated,²²¹ we may ask: What kind of generation is proper to health? Whereas the first one (i.e. φύσει) would possibly imply that self-healing is considered to be a natural teleological process, only the other two are explicitly ascribed to health in the following two passages:

The question might be raised why some things are generated both artificially (τέχνῃ) and spontaneously (ἀπὸ αὐτομάτου)—such as health—and others not; such as a house.²²²

It is likewise both with things that seem to come to be spontaneously and with artefacts; for in some cases the same things produced by art (ἀπὸ τέχνης) also come to be spontaneously (ἀπὸ αὐτομάτου), e.g. health.²²³

219 Aristotle, *Sens.* 444a14–19, ed. Ross, trans. Hett (modified).

220 Aristotle, *Metaph.* 1032a12–13, ed. Ross, trans. Tredennick.

221 Aristotle, *Metaph.* 1032b7–18 and 1033a10. Cf. *Cat.* 12a5, *EE* 1220a26–28.

222 Aristotle, *Metaph.* 1034a9–10, ed. Ross, trans. Tredennick (modified).

223 Aristotle, *PA* 640a27–29, ed. Louis, trans. Lennox.

There is no doubt that the artificial healing is a job for a physician or a 'professional man' (τεχνίτης).²²⁴ The second possibility of achieving health is identified with τὸ αὐτόματον, which is exactly the same expression used as an adjective αὐτομάτη in *On Regimen*. But unlike this author, who uses it to express the teleological self-healing capacity of *phusis*, Aristotle often seems to understand τὸ αὐτόματον as something which happens only accidentally (ἄπο τύχης),²²⁵ i.e. not for the sake of its result,²²⁶ as for example when a stone falls and accidentally hits someone.²²⁷ It does not mean that what happens by chance cannot result in some desirable goal, but whenever it happens, for example when a weather change results in the curing of someone's disease, it cannot be rendered as a goal-directed and teleological process of his own *phusis*.

So far, I have suggested that even though Aristotle has cognizance of certain processes which occur without medical assistance and result in the restoration of health, he does not interpret these as teleological, i.e. goal-directed processes originating from the nature of the living being which is healed. And this holds not only for the two discussed passages, but it seems that Aristotle speaks about spontaneous healing exclusively in non-teleological contexts. In the *Physics*, when discussing general principles of change, he admits that 'man may pass from disease to health' but it is possible only 'incidentally' (κατὰ συμβεβηχός).²²⁸ A few pages later we read:

For instance, there is no natural (κατὰ φύσιν) or unnatural (παρὰ φύσιν) change of quality (ἀλλοίωσις), for getting health (ἡ ὑγίανσις) is no more natural (κατὰ φύσιν) or unnatural (παρὰ φύσιν) than sickening (ἡ νόσσανσις), nor is growing white more or less natural than growing black.²²⁹

We can qualify neither sickening nor getting health as something natural or unnatural unless we specify the circumstances and the meaning of the

²²⁴ Aristotle, *Ph.* 195a30–31, ed. Ross, trans. Wicksteed and Cornford.

²²⁵ The expressions αὐτόματον and τύχη are often rendered by Aristotle as synonyms (*Poet.* 1452a4–7, *Cael.* 283a32–33, *PA* 641b22, *Pol.* 1323b27–29, *Metaph.* 1032a28–32. Nonetheless, in *Ph.* 197a36–b1, ed. Ross αὐτόματον is defined as a more general term including τύχη as a special class.

²²⁶ Aristotle, *Ph.* 196b34–35, 197a16, 199b21–22.

²²⁷ Aristotle, *Ph.* 197b30–32.

²²⁸ Aristotle, *Ph.* 225b23–25, ed. Ross, trans. Wicksteed and Cornford.

²²⁹ Aristotle, *Ph.* 230a21–23, ed. Ross, trans. Wicksteed and Cornford.

opposition of natural-unnatural.²³⁰ Even a disease can be described as ‘adventitious old age’ and old age as ‘natural disease’,²³¹ and accordingly Aristotle says that the perishing of man in the sense of growing old is natural,²³² even though it is nothing aimed at by nature.²³³

To sum up, despite our expectations and the fact that Aristotle evidently presupposes that certain capacities of human nature cure injuries and protect health, I have not found any evidence in his accounts confirming that there is in human nature the natural potency to cure diseases (as attested by the discussed Hippocratic authors). Moreover, some of the discussed passages even indicate that this is not accidental and that Aristotle’s principle of natural teleology is in the case of health and self-healing considerably limited.²³⁴

I have suggested that although the *natura medicatrix* principle provides a suitable pattern for Aristotle’s concept of natural teleology, he himself is evidently much more perceptive to the cases where such a self-healing capacity is deficient and assigns the restoration of health to art or to chance. In the final paragraphs I will suggest that a possible explanation for Aristotle’s position can be found by setting it against the backdrop of the status and representation of medicine in his practical philosophy.

First, I would like to turn once again to the Hippocratic authors in order to introduce two possible forerunners of Aristotle’s limitation of the *natura medicatrix* principle. The author of *On Ancient Medicine* holds that the art of medicine supplements certain insufficiencies of human nature and explains that the original imperfection of man’s constitution, namely the natural inability to digest raw food, led humanity to the discovery of the art of cooking as a part of the art of healthy regimen, i.e. medicine. As he holds from the outset

230 For example Aristotle says that if we identify ‘unnatural’ with ‘enforced’ (βίαιος—*Ph.* 230a30, ed. Ross, trans. Wicksteed and Cornford), then we can say that ‘recovery from a fever is a natural alteration if it occurs on a critical day, unnatural if the day is not critical’ (*Ph.* 230b3–5, ed. Ross, trans. Wicksteed and Cornford). Apparently, recovery can be natural on critical days, as it occurs on such a day for the most part.

231 Aristotle, *GA* 784b33–34, trans. Peck.

232 Aristotle, *Ph.* 230a28.

233 Even such anomalies as monsters (τέρατα), which are products of teleological aspirations of nature that failed to be successfully accomplished and in this (and only this) sense are unnatural, can also be explained as something ‘natural’ in a weaker or more general sense (Aristotle, *GA* 770b9–17).

234 Aristotle explains the process of healing alternatively as a result of the physician’s activity, or as something accidental (ἀπὸ ταῦτομάτου, ἀπὸ τύχης or κατὰ συμβεβηχός), but never—as far as I know—as a result of the teleological activity of *phusis* which ‘always, given the possibilities, does what is best for the *ousia* of each kind of animal’.

of his account, without medicine ‘all the affairs of the sick would be governed by chance (τύχη)’.²³⁵ Such a position probably served as an effective weapon in the battle for the status of medicine, as attested for instance by the author of the Hippocratic *On the Art*, who explicitly reacts to some critics of the day who attack the status of medicine on account of the fact that healing can occur ‘spontaneously (τὸ αὐτόματον)’ even without physicians’ assistance.²³⁶ In defence of medicine he argues that anyone who heals himself without knowledge of the medicine does so only incidentally (περιτυχεῖν, τῇ τύχῃ),²³⁷ whereas the significance of medicine rests in the knowledge of the causes (διὰ τι) of healing.²³⁸

The similarity of these Hippocratic passages with Aristotle is striking and certainly not accidental.²³⁹ The authors of *On the Art* and *On Ancient Medicine* evidently aim at securing the status of medicine against its deniers, and accordingly they rather reject the *natura medicatrix* principle in their accounts in order to reinforce the significance of the art of medicine. Aristotle seems to follow a similar strategy, even though the image of medicine he presents evidently serves other purposes than defending medicine from false insinuations. He aims at an appropriate model of medicine and doctors to construct his image of experts not only in technical, but also in political and ethical matters, in spite of the fact that the real-life doctors of the day were probably far from being such reassuring authorities.²⁴⁰ As a result, just as human existence is in need of the continuous exertion of arts—and indeed, thereby all these arts perfect and complete the nature of the species—there is a practically continuous need for the medical care of body. This will provide Aristotle with a perfect illustration for the need of a continuous philosophical care of political, moral and intellectual aspects of human life, as suggested by Edelstein.²⁴¹ Aristotle’s reassignment of much of what the other early Hippocratic writers would take as natural convalescence, and as the medical art pursuing the same path as an unaided *natura medicatrix* would also take, can therefore be rendered as an example of his tendency to develop an articulated view of the status of art as opposed to and in some sense transcending and perfecting nature,

235 VM 1 (Jouanna 118.14–119.1 = L. 1.570), trans. Schiefsky.

236 *De arte* 5–6 (Jouanna 228.6–230.20 = L. 6.6–10).

237 *De arte* 5 (Jouanna 228.9 = L. 6.8.1); 7 (Jouanna 231.1 = L. 6.10.15).

238 *De arte* 6 (Jouanna 230.18–20 = L. 6.10.12–14).

239 It is especially remarkable that τὸ αὐτόματον is identified with chance (τύχη) in no other Hippocratic treatise than in *On the Art*.

240 Cf. Lloyd 2003, 142–193.

241 Cf. Edelstein 1967, 366. See below, p. 289 n. 259.

which culminates in his views about the status of practical philosophy. Accordingly, the presentation of health as a state of the body which requires more than just tracking the normal course of nature and which cannot be achieved and maintained without the help of medical therapy provides Aristotle with an ideal parallel to his notion of philosophical ethics: similar to health, moral virtues arise in us 'neither by nature nor contrary to nature', but instead it is said that 'nature gives us the capacity to receive them, and this capacity is brought to perfection by habit'.²⁴²

2.3 *Aristotle on Distinguished Physicians and the Principles of Natural Philosophy*

To close the discussion on the legacy of *On Regimen* in Aristotle, I will briefly focus on the relation between natural philosophy and medicine as it was spelled out by Aristotle in two famous but perplexing passages in the *Parva Naturalia*, which are remarkable for several reasons. First, they both provide very rare explicit evidence for Aristotle's views on the boundaries and overlaps between the two specific, closely related yet substantially different, fields of expertise.²⁴³ Further, they have a rather prominent position within the *Parva Naturalia*, since the first one occurs in *On Sense and Sensible Objects* at the very beginning of the whole collection of these shorter naturalistic treatises, and the second is to be found in the last paragraph of *On Respiration*, which actually concludes the whole collection. Moreover, they both speak about principles and causes of health and disease. And finally, in both of these passages Aristotle speaks highly of specific medical authorities, which brings us back to our initial concern with Aristotle's reflection on the ideas of his medical predecessors in general, and of the author of *On Regimen* in particular.

At the outset of *On Sense and Sensible Objects* Aristotle explains that after having discussed the soul itself and each of its faculties in *On the Soul*, it remains 'to consider animals and all the things possessed of life, and to discover what are their peculiar and what are their common activities'.²⁴⁴ Considering the most general activities common to body and soul, he mentions sensation, memory, passion, desire, appetite, pleasure and pain, and also waking and

242 Aristotle, *EN* 1103a23–26, trans. Rackham. For the importance of education and habit in forming individual constitutions see Plato. *Tim.* 87a7–b9 or the Hippocratic *Aër.* 23 (Diller 76.5–78.8 = L. 2.82–86).

243 Cf. Lennox 2004, 68 who suggests that medicine and natural philosophy are related in a manner akin to the subordinate sciences to mathematics, e.g. optics to geometry, or harmonics to arithmetic.

244 Aristotle, *Sens.* 436a3–5.

sleep, youth and age, inhalation and exhalation, life and death. After enumerating these topics, which are for the most part discussed in the course of the *Parva Naturalia*, he turns to an issue which also has some relevance to this kind of inquiry, namely to concepts of health and disease. 'It is further the duty of the natural philosopher to study the first principles (τὰς πρώτας ἰδεῖν ἀρχάς) of disease and health, for neither health nor disease can be properties of things deprived of life'.²⁴⁵ 'For this reason', he concludes this introductory remark on health and disease, 'one can say that most of those people who study nature end with a discussion of medicine, just as those physicians who practise their discipline in a more inquisitive way (φιλοσοφωτέρως) start dealing with medicine on the basis of principles derived from the study of nature'.²⁴⁶

One can easily get the sense from reading this passage that Aristotle announces health and disease as one of the topics he is going to discuss later. This impression is reinforced at the beginning of *On Length and Shortness of Life*, where Aristotle announces: 'We have previously discussed sleep and the waking state, and later on we must speak of life and death, and similarly of disease and health, as far as they appertain to natural philosophy'.²⁴⁷ There is, nevertheless, almost nothing said about the subject in what follows in *Parva Naturalia*. The whole collection closes with one more reflection on the topic. Having finished his account of respiration and concluded that he has now virtually completed the inquiry into life, death, and kindred subjects, Aristotle adds:

As for health and disease it is not just the business of the doctor, but also of the student of nature, to discuss their causes (*aitiai*) up to a point. But we should not fail to recognize the way in which they differ and consider different issues, since the facts show that up to a point these inquiries border one another. For those doctors who are more subtle and inquisitive have something to say about the study of nature and claim to derive their principles (*archai*) from it, while the most polished of those

245 Aristotle, *Sens.* 436a17–19, ed. Ross, trans. Hett (modified).

246 Aristotle, *Sens.* 436a19–b3, ed. Ross, trans. van der Eijk: διὸ σχεδὸν τῶν περὶ φύσεως οἱ πλείστοι καὶ τῶν ἰατρῶν οἱ φιλοσοφωτέρως τὴν τέχνην μετιόντες, οἱ μὲν τελευτῶσιν εἰς τὰ περὶ ἱατρικῆς, οἱ δ' ἐκ τῶν περὶ φύσεως ἄρχονται [περὶ τῆς ἱατρικῆς].

247 Cf. Aristotle, *Long.* 464b30–33, ed. Ross, trans. Hett (modified): περὶ μὲν οὖν ὕπνου καὶ ἐγρηγόρσεως εἴρηται πρότερον, περὶ δὲ ζωῆς καὶ θανάτου λεκτέον ὕστερον, ὁμοίως δὲ καὶ περὶ νόσου καὶ ὑγείας, ὅσον ἐπιβάλλει τῇ φυσικῇ φιλοσοφίᾳ.

who study nature generally end up by considering medical principles (*archai*).²⁴⁸

The reference to health and disease in this passage can be interpreted as an allusion to a separate Aristotelian treatise on this topic, even though there is no extant text discussing in detail causes of health and disease in the Aristotelian corpus.²⁴⁹ One might imagine, for instance, that it has been lost²⁵⁰ or that Aristotle never got around to writing it, as some interpreters propose.²⁵¹ But we should also consider the possibility that Aristotle does not speak about a separate treatise but rather refers to his own remarks on the causes of health and disease scattered through the *Parva Naturalia*.²⁵² This reading has been suggested by P. van der Eijk and M. Hulskamp, who propose that the difference between the natural philosophers and physicians mentioned in the concluding passage of *On Respiration* could be seen 'as a kind of justification for the fact that what Aristotle has offered in the previous discussion is a rather different kind of treatment of health and disease than what one finds in a treatise by a medical writer'.²⁵³

It follows from the results of the analysis I pursued in the previous section that Aristotle's concept of health is very similar to the one we find in *On Regimen* and other medical texts of the time, although his causal explanations are indeed considerably different, especially in cases concerning natural

248 Aristotle, *Resp.* 480b22–30, ed. Ross, trans. Lloyd (2003, 195): περί δὲ ὑγείας καὶ νόσου οὐ μόνον ἐστὶν ἰατροῦ ἀλλὰ καὶ τοῦ φυσικοῦ μέχρι τοῦ τὰς αἰτίας εἰπεῖν. ἥ δὲ διαφέρουσι καὶ ἡ διαφέροντα θεωροῦσιν, οὐδεὶς γὰρ λανθάνειν, ἐπεὶ ὅτι γε σύνορος ἡ πραγματεία μέχρι τίνος ἐστι, μαρτυρεῖ τὸ γινόμενον. τῶν τε γὰρ ἰατρῶν ὅσοι κομψοὶ καὶ περίεργοι λέγουσιν τι περὶ φύσεως καὶ τὰς ἀρχὰς ἐκείθεν ἀξιούσι λαμβάνειν, καὶ τῶν περὶ φύσεως πραγματευθέντων οἱ χαριέστατοι σχεδὸν τελευτῶσιν εἰς τὰς ἀρχὰς τὰς ἰατρικάς.

249 The tenth book of *HA* has been suggested as Aristotle's medical work (van der Eijk 1999), but it focuses specifically on sterility and its causes and does not discuss health and disease in general.

250 Nutton 2004, 120 and 356 n. 35. In support of this view, it should be noted that Diogenes Laertius mentions a treatise on medical issues (Ἰατρικά) in two books in the list of Aristotle's works (*Vitae* 5.25, ed. Dorandi), and that the author of *Anonymus Londinensis* repeatedly refers to Aristotle as his source of information concerning the opinions of ancient physicians on the causes of health and disease (*Anon. Lond.* 5.37, 6.42, 7.43, 23.42, 24.6, ed. Manetti).

251 Cf. King 2001, 154 n. 38 and 173 n. 84, van der Eijk 1995, 452.

252 Cf. Aristotle, *Sens.* 444a14–25 and 445a29–b1, *Somn. Vig.* 456b6 and 457a1–3, *Insomn.* 458b25–26, *Resp.* 479b21–22.

253 Van der Eijk-Hulskamp 2010, 65.

self-healing.²⁵⁴ Accordingly, supposing that Aristotle discusses common topics approached from different perspectives in the *Parva Naturalia*, it is understandable why he encourages his readers to recognize the way in which the medical and naturalistic accounts 'differ and consider different issues'.

In the same passage Aristotle also mentions principles (*archai*) which the philosophically minded physicians derive from the study of nature and which should therefore be equally relevant for both doctors and natural philosophers. Why should these physicians deserve commendation from Aristotle, supposing that they themselves claim to derive their principles from a more general study of nature? And why are they said to have something to say about the study? These questions lead me to my final consideration.

Three points, which I have tried to substantiate in the first part of the Aristotelian section, must be borne in mind. First, the concept of innate fire or heat is attested almost exclusively in medical contexts in the extant pre-Aristotelian evidence. Secondly, Aristotle makes numerous references to his predecessors in passages introducing this concept. Finally, the same concept serves as a principle on which more complex physiological accounts are based both in Aristotle's works and in *On Regimen*. Taking these points together it is possible to conclude that the concept of innate heat, and likewise the notion of health as balance, the premise that nature acts teleologically, or the demand to provide causal explanations, can serve as examples of an *archē* which Aristotle, as a representative of the 'most polished' naturalists, shares with the 'distinguished', 'philosophizing', 'more subtle' or 'inquisitive' physicians, such as the author of *On Regimen*. Accordingly, Aristotle's claim that these physicians have 'something to say about the study of nature' might be understood as a discreet recognition of the contributions of the author of *On Regimen* and other medical authorities of the day not only to the domain of medicine but also to the kind of theoretical science of nature that he himself endorses.²⁵⁵

254 Cf. the passage *PA* 653a8–10 quoted above (p. 259), which displays close parallels with *On Regimen* and concludes with a remark on certain limits concerning natural philosophy and a reference to discussions of the origins of diseases.

255 As for the idea (*Resp.* 480b27–28, ed. Ross) that these physicians claim to derive (ἀξιούσι λαμβάνειν) their *archai* from the general study of nature (περὶ φύσεως), a possible parallel can be found in the second chapter of *On Regimen*, where the author demands that whoever wants to write correctly about human regimen must first of all be familiar with the 'nature of man in general (παντὸς φύσιν ἀνθρώπου)' (*Vict.* 1.2, Joly-Byl 122.22–23 = L. 6.468). As discussed in detail above (chap. 1, pp. 57–99), for him this means identifying the primary elemental principles, which constitute not only humans but all living organisms, and

Conclusion

In this chapter I have aimed at making the case that *On Regimen* is not only a document of crucial importance for the history of dietetics, but that it also played an important role in the transmission and development of ideas which were essential in the field of natural philosophy. First I have focussed on the evidence of Plato's *Timaeus* and concluded that, despite his rejection of the care of the body in general in the *Phaedo* and the reservations in the *Republic* towards the new medicine represented by preventive dietetics, in the *Timaeus* Plato seems to abandon the strongly dualistic conceptions of his earlier dialogues and enthusiastically recommends application of dietetics in the prophylaxis concerning both body and soul. There he employs and further elaborates upon some of the most essential issues that are characteristic of the dietetic discussion of the day, such as the concept of symmetry or the focus on the active prophylaxis, and exploits several notions attested exclusively or most elaborately in *On Regimen*. These notions include the discernment of nutrition and movement as the essential principles of regimen, the concept of circular movements of soul that are akin to heavenly circuits, the necessity of proper regimen linked to the healthy functioning of one's cognitive faculties, or the value of observing heavenly bodies for the health of soul. Although Plato's *Timaeus* also innovates in these areas, he is essentially in agreement with *On Regimen*, and it is therefore reasonable to hold that the Hippocratic author had a significant influence upon Plato's thought. In view of that, we can regard the *Timaeus*, which is traditionally believed to be written by the later Plato (ca. 360–347 BCE),²⁵⁶ as a sufficiently probable *terminus ante quem* for the Hippocratic treatise.

Supposing that late Plato read and drew on this particular dietetic account, it is not at all surprising to find that Aristotle should also pay attention to the same text. In order to endorse the hypothesis that Aristotle reacts to this particular text, in the first part of the Aristotelian section I have focused on passages from various naturalistic texts which attest close parallels with the Hippocratic account of fire, innate heat and kindled soul. In the course of my discussion I have argued that Aristotle draws on a specific concept of innate fire or heat in these passages for which we find parallels almost exclusively in Hippocratic

explaining not only the issues concerning health and disease but also the most general questions concerning life and nature (cf. Miller 1959, 147–148).

²⁵⁶ Despite the attempts of Owen 1953 and others to challenge the orthodox view according to which the *Timaeus* was written during Plato's 'late' period, recent scholarship seems to be more or less in agreement on that point; cf. Zeyl 2000, xvi–xx.

treatises,²⁵⁷ that *On Regimen* is the richest and most important extant evidence for such ideas, and that Aristotle discusses a number of particular details of the concept, which are unique to *On Regimen* and unparalleled in the extant literature of the time.²⁵⁸ In the light of these concurrences it is, I believe, reasonable to conclude that not only Plato, but also his disciple Aristotle knew *On Regimen* and read it closely. Moreover, accepting that Aristotle regularly alludes to the text of *On Regimen* and presents even the most peculiar of its ideas as if they were commonplace, one may infer that he reads the text as a representative of a more general approach and that he even expects his audience or intended readers to be well acquainted with the dietetic account. This suggests that already in Aristotle's time *On Regimen* stood as a standard point of reference in the discussion of the nature of man.

Drawing on these conclusions, in the second part of the Aristotelian section I have used the evidence of *On Regimen* and several other extant Hippocratic treatises as a background for analysing Aristotle's concepts of health and natural teleology. These, I argue, can be interpreted, on the one hand, as a responsive reaction to the medical tradition, whilst, on the other hand, Aristotle also has in view the specific goals of ethical and political discussions. Following a similar strategy as Plato, who takes into account and modifies a whole range of dietetic topics in order to establish the necessity of a continuous self-care of one's soul, and especially the rational part of the soul, Aristotle introduces a specific notion of health which is rather accidental to the nature of man and, accordingly, holds that spontaneous healing of diseases does not have to be interpreted teleologically. Although such a stance considerably limits Aristotle's general premise that nature always does what is the best, it has important consequences for the image of medicine as a model to be deployed in the field of practical philosophy, and particularly in ethics: as the delicate

257 Apart from the Hippocratic treatises, pre-Aristotelian evidence for the expressions ἔμφυτος and σύμφυτος θερμότης is extremely poor. It is occasionally ascribed to some Presocratics (cf. Diogenes, DK 64 A 24 and A 28, Empedocles, DK 31 A 74), but it is highly questionable whether these testimonies preserve authentic terminology, which is also the case for several fragments of Aristotle's contemporary Diocles of Carystus (fr. 27, 31, 40, 75, ed. van der Eijk). There are also several passages employing the idea of internal fire (τὸ ἐντὸς πῦρ) in Plato's *Timaeus* (e.g. 45e1–2, 46a4–5, 78e6, 79d1–6), which might reflect the same sources with which Aristotle was working and thus confirm their significance for the ongoing discussions on the nature of man.

258 An additional trace of *On Regimen* can be found in Aristotle's claim that health as a good condition results from appropriate exercises (πόννοι) and nutrition (τροφή) and that it can be destroyed by the same means (Aristotle, *EE* 1220a24–28).

balance of health demands more or less permanent medical care, there is also the need for an unceasing care for our ethical virtues.²⁵⁹

In the third part I briefly focussed on the relationship between medicine and natural philosophy as it is spelled out in the two famous passages in Aristotle's *Parva Naturalia*. As I suggested, in these passages Aristotle refers to certain general principles, such as the concepts of innate heat, health as balance of elemental qualities, or the goal-directedness of natural processes, adopted both by natural philosophers and physicians (or medical authors). The author of *On Regimen* is certainly one of our best candidates to be such an author, and to my knowledge there is no other extant text of the time which shows so convincingly the debt of Aristotle to his medical predecessors.

Appendix

The Hippocratic On the Heart and On Regimen confused in the edition of Aristotle's Parva Naturalia by D.W. Ross.

Since the publication of the Oxford edition by D.W. Ross in 1955, it has remained 'by far the best edition of the *Parva Naturalia*, and a fine contribution to Aristotelian studies'.²⁶⁰ Readers of Aristotle still use it as a standard edition of the Greek text, and it is, therefore, desirable to indicate every possible insufficiency of the book. A number of emendations to the edition of the Greek text, the commentary and also the introduction to the book have already been suggested by various reviewers.²⁶¹ I would like to discuss a corrupted passage in the introduction at pages 56–57, which confuses two different Hippocratic texts. Let me start with quotation of the passage under consideration:

It is almost certain that Aristotle, as a member of an Asclepiad family, was familiar with those works of the Hippocratic corpus which were written before or in his time. One of the best of these was the *Περὶ διαίτης*,

259 Edelman 1967, 366 was certainly right when concluding that 'medicine did serve philosophy as a means of explaining and making acceptable to men that conclusion which philosophy itself had reached, that man can live without philosophy as little as he can live without medicine'. But it should be added, as I have tried to illustrate with the example of Plato's and Aristotle's reflections on the Hippocratic *On Regimen*, that it was sometimes at the cost of a rather distorted image of medicine and its original concepts.

260 Furley 1956, 228.

261 Andrews 1955, Furley 1956, Guthrie 1956, Allan 1956, Philips 1956, Temkin, 1956, Peck 1957, Kraak 1957.

which scholars date about 370 B.C. His account of the heart differs in some respects from that given the *Περὶ διαίτης*; e.g. while it correctly assigns two chambers to the heart, he assigns three. On the other hand, his conception of the heart as the organ responsible for animal life, and of the σύμφυτον θερμόν of which it is the seat, is quite in accordance with the conceptions of the *Περὶ διαίτης*, and his comparison of the heart-lung system to a double bellows is clearly borrowed from the earlier treatise. There is still much work to be done by scholars on the debt of Aristotle to the Hippocratic schools; so far as the *De Juventute* and the *Περὶ διαίτης* are concerned, the debt is clear.²⁶²

In this passage Ross suggests that Aristotle evidently borrowed his account of the heart and other topics presented in *On Youth and Old Age* (*De Juventute*) from the Hippocratic *On Regimen* (*Περὶ διαίτης*), and that this fact may serve as a support for the claim that Aristotle 'was familiar with those works of the Hippocratic corpus which were written before or in his time'. Even though I do believe that both claims are true, neither of them can be supported by the argument provided by Ross for the following reasons. The reference to *On Regimen* is evidently wrong: there is no discussion of the heart and lungs in this treatise and its author does not even use expressions like καρδίη or πνεύμων. In support of his thesis Ross quotes five passages in Greek (p. 56, n. 5) but these do not belong to *On Regimen*, coming instead from another Hippocratic treatise, namely *On the Heart* (*Περὶ καρδίας*). Moreover, in the second footnote on page 56 Ross refers to an edition of the Greek text he discusses ('Edited by H. Unger in *Mnemosyne*, li (1923), 1–101.'), which is actually an edition of the Hippocratic treatise *On the Heart*, originally entitled 'Liber Hippocraticus *Περὶ καρδίας*'.

It is, thus, clear that Ross intended to read and interpret passages from the Hippocratic *On the Heart*, not from *On Regimen*. This mistake (or perhaps a misprint) was indicated already by A.L. Peck in his review of the book, where he suggests: 'on pp. 56 and 57 the Hippocratic treatise *περὶ καρδίας* is five times described as *περὶ διαίτης*.'²⁶³ Unfortunately, Peck's emendation has remained unnoticed by the modern scholarship, Ross' text has been repeatedly used as evidence for Aristotle's acquaintance with the Hippocratic *On Regimen*,²⁶⁴ and the error unfortunately still remain in Ross' edition reprinted in 2000. In addition, the suggested emendation still could not protect readers from another

²⁶² Ross 1955, 56–57.

²⁶³ Peck 1957, 332.

²⁶⁴ Van der Eijk 1994, 279, van der Eijk 1995, 455 n. 22, van der Eijk 2005, 198, van der Eijk 2007b, 489 n. 1.

misunderstanding concerning the relationship between Aristotle and the Hippocratics. Peck praises Ross in his review for drawing attention to ‘the importance of the Hippocratic *περὶ καρδίας* and Aristotle’s indebtedness to it’ (p. 332). Even though there is no doubt that there are close parallels between the texts of *On Youth and Old Age* and *On the Heart*,²⁶⁵ Ross’ suggestion needs a qualification concerning the question of chronology and the possible transmission of the discussed ideas. According to recent attempts to date the Hippocratic treatise, it was very probably written at the end of the 4th century or even later, i.e. after Aristotle.²⁶⁶ Therefore, the parallels indicated by Ross and Peck may eventually support the idea that Aristotle has substantially influenced some of his medical successors, but it cannot prove the dependence of his ideas on the heart (and other topics mentioned in Ross’ argument) on the text of *On the Heart*.

265 These parallel passages are discussed in detail in Oser-Grote 2004, 82–96.

266 For the most recent discussion on the dating of *On the Heart* see Duminil 1998, 175–180, and Craik 2015, 56.

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